An Address
ON THE
RELATION OF MICRO-ORGANISMS TO INFLAMMATION.

Delivered before the Pathological Section of the International Medical Congress on opening a Discussion on the Relation of Micro-organisms to Unhealthy Processes arising in Wounds, August 5th, 1881,

BY JOSEPH LISTER, F.R.S.,
PROFESSOR OF CLINICAL SURGERY IN KING'S COLLEGE.

MR. PRESIDENT AND GENTLEMEN,—In opening a discussion on the subject of the relations of micro-organisms to disease in general at the meeting of the British Medical Association at Cambridge last year, I brought forward what seemed to be some established facts illustrating the connexion between minute organisms and certain specific disorders, both constitutional and local. I dwelt especially upon the admirable investigations of M. Pasteur into the "choléra des poules," and those of Toussaint and others into malignant pustule or anthrax, and the exceedingly beautiful results obtained by the experiments and methods of Dr. Koch. This morning we have to discuss a more limited portion of this great subject—namely, the relations of micro-organisms to unhealthy processes arising in wounds. I have the great satisfaction, gentlemen, of knowing that Dr. Koch is present among us, and also that with infinite kindness, and very great trouble to himself, he is about to exhibit at King's College, to a limited number, his methods of procedure in actual operation. It is but to a limited number that these demonstrations can be made, because only a very few at a time can see them to advantage; but I have also the great satisfaction of knowing that Dr. Koch will exhibit this afternoon in this room by the magic lantern photographs of sections made by himself of various diseased tissues, illustrating the effects of micro-organisms. These photographs will be as convincing and as satisfactory as the actual demonstration of Dr. Koch's processes, because the pictures drawn by light are entirely free from those errors which can hardly fail to creep in as a consequence of mental bias when a sketch of these minute objects is made by the human hand. Permit me to return to Dr. Koch the thanks of this section for his great kindness in this matter. Thus the Congress will have an opportunity of seeing confirmed, and indeed extended, the kind of evidence which I brought before the British Medical Association last year.

But while I am more than ever convinced of the importance of the relations of micro-organisms to diseased processes in wounds, I propose this morning to utter what seems to me a needed note of warning against a tendency to exaggeration in this direction. This exaggeration, if such there be, is largely due to the success of antiseptic treatment. If we treat our wounds by means expressly calculated to exclude altogether the entrance into them from first to last of minute organisms, not only are the specific diseases got rid of, not only do hospital gangrene and pyæmia, those scourges of former surgery, fly away as at the touch of the enchanter's wand to trouble us no more for ever, while septicæmia also vanishes, and erysipelas, though more stubborn, is robbed of its terrors,—not only, I say, do these diseases, recognised as specific, disappear, but if the treatment is properly conducted we get rid of inflammation altogether. And we see wounds that are left with their edges widely gaping, and become occupied by a substantial blood-clot, heal, it may be, without a particle of pus, a cicatrix forming beneath the superficial layers of the coagulum. Such results, proceeding from a mode of treatment designed especially to exclude bacteria, may suggest the idea that all inflammation is caused by micro-organisms, and that suppuration, whether acute or chronic, is always due to similar agencies. Gentlemen, this I believe to be a very exaggerated view of the matter, and a view which may tend to have a serious influence upon our practice. For example, if we believe that inflammations are due only to an invasion of microscopic parasites,—if that is the sole cause of inflammation in every case, to what purpose is it to employ counter-irritation? Counter-irritation would seem an absurdity under such circumstances; and accordingly I lately read in a work by a most able surgeon the statement that counter-irritation may be regarded as a thing of the past, as something exploded. Again, in the case of those important diseases which we term strumous, the languid degeneration of tissue which we see in feeble constitutions, there is at the present time a tendency to look upon this as altogether of an infective nature. This also I believe to be an exaggerated view, and one which may injuriously affect our practice. If, for example, I really believe that the degenerated tissue is infected with an invading parasite which is the essence of the disorder, the natural inference will be that if I am to resect a joint affected with strumous disease I ought to cut out the whole of the diseased structures; I should not be satisfied without cutting away all the degenerated textures, a practice which I believe would often be exceedingly disadvantageous to our patients.

Let me say a few words in the first place with regard to acute inflammation. Acute inflammation is certainly very often caused by the products of decomposition, the results of fermentation induced by the development of minute organisms. Of that we have abundant proof; but we have also sufficient evidence, as it appears to me, that inflammation is often caused otherwise—viz., through the nervous system; that, in fact, the ancient principles of John Hunter with regard to sympathy were true principles. Let us take, for example, the case of irritation of the urethra leading to disturbance of the kidney without any affection of the intermediate parts: the irritation applied to the urethra, the effect produced upon the kidney. This I conceive can only be explained through the nervous system. For instance, I have seen a strong and apparently healthy patient on whom lithotomy had been performed go on perfectly well until the first occasion of the passing of urine through the urethra as the wound healed. He then had a violent rigor, and from that moment there was complete suppression of urine. Death occurred from uræmic poisoning, and upon post-mortem examination I found what had apparently been previously perfectly healthy kidneys affected throughout with most intense inflammatory congestion. That I can only explain as occurring through the nervous system, by virtue of nervous sympathy existing specially between one part of the urinary tract and another. Again, I have known a medical man affected with stricture pass after an interval of many years a bougie upon himself. The first time he passed water after this had taken place he felt a cutting sensation in the urethra, and had a violent fit of shivering. He had all the appearance of being likely to follow the same course as the other patient—viz., that death would result from uræmia. He sent for me when suppression of urine had already fully declared itself. I had a piece of thin mackintosh cloth put under his back, and on this piece of mackintosh cloth, between it and the loins, I had placed a large mass of flannel wrung out of boiling water as hot as it could be applied, and the mackintosh cloth drawn rapidly round the body and fixed in position with a sheet pinned over it. He, a medical man, accustomed to observe, told me afterwards that the effect of this seemed to be like the operation of a charm. He experienced an immediate sense of relief, and in a very short time he passed water again, the kidneys resuming their functions. Inflammatory congestion, caused sympathetically by irritation in the urethra, had been got rid of, and that by virtue of something acting on the principle of counter-irritation—an irritant applied to the skin of the loins, the part of the surface which is most in sympathy with the kidneys. It is the same sort of sympathy by virtue of which the accoucheur can induce the contraction of a relaxed uterus by applying a cold wet towel to the hypogastrium and the vulva—the special sympathy which, as John Hunter pointed out, exists between an internal organ and the integument nearest to that organ.

Then, to take a very simple case, let me refer to the result of tight stitches. I once saw in a patient, about three days after removal of the mamma, where the edges of the wound had been brought together by interrupted sutures unusually tightly applied, an inflammatory blush extending up to the collar-bone. I took out the stitches and watched the result; the fiery redness faded away before my eyes, and in a few minutes was almost entirely gone. That redness was indubitably brought about by sympathy; the stitches acted upon certain nerves, and through the nervous system the inflammatory

disorder was produced. I imagine that all physiologists will admit that determination of blood might be induced through the nervous system. But it is not only this effect that we see from tight stitches; we see also in time œdema, and we may even see death of tissue from the violence of inflammatory disturbance in the more immediate vicinity of the stitch, though the stitch only acts directly upon a microscopically small portion of the tissue.

Counter-irritation seems to be based upon a law in physiology, which I may take the liberty of illustrating by some simple examples. Suppose a fly settles upon the skin of the face: we experience an intolerable sense of itching; we rub the part with the finger, and the itching disappears—a fact familiar to all the world. But now I find that the same effect of removing the sense of itching takes place if, instead of rubbing the actual spot on which the fly settled, I rub in a ring round it, without touching the spot at all. What is the interpretation of those facts? In the first place, I suppose the sense of itching depends upon an abnormal action of the sensory nerves of that particular spot on which the fly settled. By rubbing a ring in the vicinity I call into play a strong action of the sensory nerves of a neighbouring part of the skin which is in sympathy with that part on which the fly settled, by virtue of the same nervous connexion through which the skin of the chest blushed as the result of a tight stitch. And this new nervous action occurring leads to the cessation of the abnormal action which was previously going on; as if the attention, so to speak, of the nervous system were distracted from the affected part. That may seem a very homely illustration; but if the interpretation is correct, it serves the purpose none the worse on that account. Suppose, again, we feel a sense of irritation in the Schneiderian membrane—a sense of irritation which, if it goes on, will relieve itself by the violent action of the expiratory muscles which we term sneezing; and supposing we are desirous that this act should not take place—it would be inconvenient, perhaps, that we should sneeze,—if with the hand we violently rub the tip of the nose so as to produce a considerable sense of uneasiness there, the sneeze is prevented. I do not touch the part affected with the abnormal sensation, but I call into play a strong action of the nerves in a part which is in sympathy with it—a part of the same nasal organ,—and by so doing I cause the previous action to cease. That is another simple but instructive example of physiological counter-irritation.

Take one more instance. I was once asked to see a young woman, previously in perfect health, who, taking her broth, "kail," as the Scotch call it, very voraciously, swallowed the bud of the kail plant, and this became impacted in the upper part of the œsophagus. Of course she could not swallow, and she came to my house-surgeon to be relieved. He made certain attempts, which were not successful, and three days after the accident I was asked to see her. During these three days she had remained in apparently perfect general health; she had her usual florid complexion, the pulse was absolutely undisturbed; the tongue, too, it so happened, was perfectly clean. But, what was very remarkable, she had had no sense of hunger for those three days; but she had had a curious yearning sort of uneasiness in the epigastrium, induced by the presence of the foreign body in the œsophagus, and this abnormal sensation, caused by the object in the œsophagus, had taken the place of hunger. By virtue of the sympathy existing between the œsophagus and the stomach, the sensation, or nervous action, which constitutes hunger had been prevented from occurring. I extracted the bud which was plugging her œsophagus, and the normal sensation of hunger soon returned. Here, then, was another example of physiological counter-irritation—a term which I have ventured to apply to cases in which the excited nervous action which the counter-irritation removes has not overstepped the limits (indefinite though they be) which separate health from disease.

It appears, then, that it is a law of physiology that when two parts are nervously in sympathy with each other, if we excite a great action in the nerves of one we may distract action from the nerves of the other. Now this will serve to throw great light upon the nature of inflammation itself if we find that counter-irritation is really a valuable means for the treatment of inflammation. That such it is I will only give one or two illustrations. I once fell upon the ice with my knee bent, striking the knee and producing at once a severe strain and a severe contusion. The knee became violently inflamed, the inflammation being characterised by intense pain and effusion into the knee-joint. I treated myself by a splint to ensure rest, and hot fomentations. Every time a fresh hot fomentation was applied, though the heat was so great as to be painful to the skin of the knee, I rejoiced in it on account of the removal of the pain from the interior which always attended it. I remember once having a severe attack of sore-throat, and a mustard poultice was put on of pure mustard and water. The mustard, of course, caused a burning sense of uneasiness in the skin of the throat; but it was a delightful sensation to me, because I felt that while this burning uneasiness was caused to the skin, the sharp cutting pain of the interior of the throat was at once attacked, and gradually disappeared under the influence of the counter-irritant. Experiences like these in one's own person have a more convincing effect than reports from the lips of patients. Let me give one more example, and that is the effect of the actual cautery in certain forms of articular disease. When I went first to Edinburgh the thing that struck me most was the effect of the cautery as applied by Mr. Syme in certain cases of joint disease. The first instance of this which I saw was a young woman with an exceedingly painful affection of the shoulder-joint. It was not hysteria, for there was atrophy of the deltoid muscle from instinctive disuse, and the disease was marked by intense pain, extending to the finger-tips, instead of being limited to the joint, as it would be in hysteria. The pain was, at the same time, worse at night, depriving her almost entirely of sleep, and it was accompanied by other abnormal sensations. Mr. Syme applied the actual cautery of red-hot iron before and behind the joint, and when the patient woke up from the chloroform sleep the pain was gone, and never returned; and the disease, which had been going on and gradually progressing for months, was cut short from that time, and before long she left the hospital with a well-developed deltoid muscle. Several cases of a similar nature happened to occur about that time. One was that of a young man with "ulceration of cartilage" in the articulations between the occiput and the atlas, and between the atlas and the axis. The disease caused exquisite agony, shooting down to the shoulders and up into the head. The patient could not raise his head from the pillow without supporting it with his hand; he could not look up to the ceiling or turn his head at all to one side without moving his whole body. Here, again, the pain was worse at night, and that the disease had already produced great effects was evident from the fact that on examining the throat with the finger we felt an irregular prominence of the bodies of the vertebræ in the posterior wall of the pharynx. Mr. Syme applied the cautery to the skin of the back of the neck over the upper cervical vertebræ, and though in this instance the abolition of pain was not immediate, but took place more gradually, this most formidable inflammatory disorder, which had long resisted other forms of treatment, went on steadily to complete cure; and that the cure was permanent was proved by his coming to the hospital some time after to introduce his bride to us.

Now, if it be true that counter-irritation is a powerful means of treating inflammation, and if the explanation which I have given of the mode of the action of counter-irritation, as illustrated by the physiological cases, is correct, then I say the effect of counter-irritation in the treatment of inflammation throws great light upon the nature of inflammation itself, and upon the relation of the nervous system to it. If counter-irritation cures an inflammation by withdrawing nervous action from the affected part, it follows that the inflammation so cured was maintained by an abnormal action of the nerves of the part.

This conclusion is confirmed by the fact that it is in harmony with and elucidates the mode of operation of the most frequent cause of inflammatory attacks—exposure to cold. How does a chill of the surface lead to an internal organ becoming inflamed? Why should a draught of cold air upon the chest lead to an attack of inflammation of the lungs? First, it seems clear that in some way or other the effect is brought about through the nervous system; for the integument only is chilled, and the deeply-seated internal organ suffers, while the same law of sympathy or nervous connexion which we have seen in counter-irritation applies equally here; it is the cooling of the skin nearest the internal organ that is most likely to cause its inflammation. And, further, the cold sometimes "strikes in" with a suddenness that conveys the idea of a nervous shock, and seems to preclude the hypothesis of any other agency than that of the nervous system. Next we have to ask what immediate

effect does cold produce upon the nerves of the surface on which it acts? One effect which cold certainly does produce is to lower the activity of the nerves on which it operates. In this respect it is the converse of heat. It therefore seems natural to suppose that cold acts in causing inflammation exactly on the converse principle that heat may act in curing it; a diminution of the action of the nerves of a part of the surface leading to an increased action of the nerves of an internal organ in sympathy with that part. And this view of the matter is confirmed by familiar experience. Suppose a man is liable to inflammatory disorder of the bowels, what is the time when he must be most careful to keep his coat buttoned up when he walks out into the cold air? It is immediately after taking a hearty dinner; it is just at the time when there is the greatest amount of physiological activity of the organs liable to inflammation. When the nerves of the internal organ are already doing their utmost consistently with health, then it is that it is most likely to suffer from additional nervous action thrown upon it in consequence of depression of nervous activity in the chilled integument with which it sympathises—exactly the contrary effect, as it appears to me, to that of the actual cautery, the mustard poultice, or the hot fomentation.

Let me now give a single example of the influence of the nervous system in producing or maintaining chronic inflammation. Suppose a patient comes to us with chronic inflammation of the synovial bursa situated over the patella and its ligament, chronic housemaid's knee. This, as we all know, is a very obstinate complaint, and may have resisted perfect rest, blistering, and a variety of other treatment. If it has existed any length of time we find that there is not only effusion of fluid into the synovial sac, but inflammatory thickening of the surrounding tissues. Now, I find that if we make a puncture in the sac through the skin with a tenotome and introduce a little drainage-tube not bigger in calibre than a crowquill, at the same time doing this in such a way as to prevent the entrance of putrefaction and employing an efficient antiseptic dressing, we may reckon on it as a matter of certainty that the disease which has been previously so obstinate rapidly becomes cured. We change the dressing in the course of a day or two in order to shorten the tube, and at the next dressing we probably find the serous oozing has been so slight as to permit us to dispense with the tube altogether, and within a week or ten days the little puncture is healed. Meanwhile, not only is there no reaccumulation of fluid, but the thickening of the surrounding tissues disappears rapidly, and before long vanishes altogether. Let us look at the interpretation of this fact. And first let me remark that the treatment which so rapidly causes subsidence of the obstinate inflammatory disorder does not act directly upon the diseased synovial membrane at all. For we do not inject the antiseptic into the sac: all that we do is to let out the fluid and provide against reaccumulation during the next few days while preventing the entrance of septic material. It is, therefore, plain that the presence of the fluid in some way or other maintained the chronic inflammation. How did it do this? Not by means of micro-organisms, for it was clear and transparent, and contained none. Not by chemical irritation, as would have been the case had it contained the acrid products of putrefaction. Had the fluid been pus it might have been contended that it might possess some slight chemically irritating property. But it was the bland and wholly unstimulating liquor sanguinis. We are therefore led safely another step, and infer that the mere mechanical presence of the fluid, or, in other words, the tension which it occasioned, was the efficient agent. Yet it is inconceivable that the inflammatory phenomena could be caused directly by pressure of the fluid upon the synovial surface. Synovial effusion is not as a matter of fact induced by mere pressure, though carried to a far greater degree than the often slack collection of fluid could occasion. Or, if there be felt any doubt on this point, there can certainly be none with regard to the impossibility of the surrounding thickening being the direct effect of the pressure. We are therefore compelled to have recourse to the nervous system; and it is not difficult to understand how it is called into play, the sac being stretched by the accumulated fluid and its nerves thus sufficiently stimulated to maintain the chronic inflammation.

I have next to say a few words regarding suppuration. Here we have not only the results of antiseptic treatment favouring the idea of micro-organisms being its cause, but we have actual observations of such organisms present in the pus. Dr. Ogston of Aberdeen has lately made some very remarkable observations to this effect.[1] He has investigated by Koch's methods a very large number of abscesses, and in every acute abscess which he has examined he has found the pus loaded with micrococci. Not only so, but, if he has an opportunity of observing it, he finds the pyogenic membrane infiltrated with such organisms. There you have direct observation which seems at first sight to imply that the micro-organisms are the cause of the suppuration. But this same accurate observer has also investigated chronic abscesses in large numbers, and he has not found micrococci present in any; and therefore this same authority himself teaches us that micrococci are certainly not the sole causes of suppuration. And when we turn to the acute abscess it seems to me that Dr. Ogston leaves us entirely without any explanation as to the origin of the infection in the part in which the abscess occurs. If we are to suppose that the micrococci are really the cause of the suppuration, we must also suppose them to be the cause of the inflammation which precedes it. But the inflammation that precedes the suppuration may be induced by some altogether accidental circumstance. For instance, a woman during lactation, with the mammary gland in a state of high physiological activity, corresponding with that of the digestive apparatus of a person after a hearty dinner, as before referred to, is disposed to "take cold" in the part; and as the result of an accidental chill an acute attack of inflammation may occur, threatening milk abscess. If we get such a case to treat in the early stages, the inflammation may never go on to suppuration at all; it may terminate by resolution. But if left to run its course it causes abscess. We can hardly suppose that the accident of exposure to cold could lead directly to the development of micrococci in the part. Nor, even if this were admitted, can we readily understand how any treatment that we can adopt could lead to their dispersal if they were the essential cause of the inflammation. And, further, there is this to be added, that if we treat such an abscess antiseptically, we find exactly the same results as in a chronic abscess. I had a case under my care lately in King's College Hospital of a woman with a milk abscess of this kind, essentially acute. I opened it, and introduced a drainage-tube antiseptically, and there was not another drop of pus after the evacuation of the thick original contents—merely a serous oozing, and this rapidly subsided. Why did not the suppuration continue if the micrococci were the essential cause of it? I examined, along with Mr. Cheyne, some preparations which he was good enough to make for me, by Koch's method, of the serum that came from this abscess three days after it had been opened, and we had to make a long search before we could discover a single group of micrococci. The main mass of those which, from Ogston's observations, I cannot doubt were originally present had been already almost entirely got rid of. No sooner had the abscess been relieved of the tension occasioned by the pus pent up within it (while at the same time the entrance of septic ferments was prevented) than the inflammation, following the natural bent of all inflammations when all causes of irritation are withdrawn, proceeded rapidly to subside, and the tissues of the pyogenic membrane and surrounding parts, regaining their normal vigour, were then able to dispose of the micrococci with which they were infiltrated, just as the organism disposes of ordinary bacteria of various kinds after they have been injected into the circulation. Surely the natural, if not the inevitable, interpretation of this course of events is that the essential cause that kept up the acute inflammation of the abscess and prevented it from subsiding, like that which maintained the chronic inflammation of the bursa patellæ, was the tension of the accumulated fluid, and that the presence of the micrococci was of entirely insignificant importance. Hence I am disposed to regard the view which has been taken of this matter by Mr. Cheyne as the one most consistent with the present state of our knowledge—viz., that the micrococci are, so to speak, a mere accident of these acute abscesses, and that their introduction depends upon the system being disordered. It has been now abundantly established by the observations of Mr. Cheyne himself as well as by those of Dr. Koch and other observers, that in the healthy state of the animal body there are no micro-organisms present among the tissues. It is certainly a marvellous thing that the animal body is able so to fence itself against the introduction of these minute living beings so disposed to diffuse themselves in organic liquids, considering the innumerable channels which seem so well

[1] See British Medical Journal, March 12th, 1881.

adapted for their reception: the respiratory passages and the alimentary canal, with the openings of the countless ducts, cutaneous and mucous. But so it is. It is only in a state of unhealthiness that the ordinary forms of bacteria can enter the circulation and establish themselves in the organism. It would appear that in the healthy body even pathogenic bacteria must enter in certain numbers to be able to survive; even the most virulent forms of micro-organisms must be introduced in a certain amount; if they are very much diluted even they cannot survive in the animal body. But with regard to these ordinary micrococci of which we are speaking, they do not survive among our tissues except in a state of disorder of the system, local or general. Mr. Cheyne will, I hope, have the opportunity of bringing before us some fresh facts in elucidation of this subject. From what he has already published[2] we know that by lowering the system of an animal, such as a rabbit, by the administration of phosphorus, he has brought about a condition in which micrococci do enter the system and are found in multitudes in the internal organs. Mr. Cheyne's idea, therefore, is that when an inflammatory attack is sufficiently severe to produce serious febrile disturbance, these micrococci get in, and, finding in the pus of an abscess a congenial soil, develop in it in abundance.

It remains for me to say a word as to those most chronic and languid forms of inflammation which we term strumous. And first I have this to say, that chronic abscesses connected with strumous caries of the vertebræ heal completely, as we know by experience, if we do but keep the spine sufficiently long at rest, and patiently persevere with thorough antiseptic care. The situation of the diseased part prevents the possibility of attempting its extirpation by operation. But happily such treatment is not called for. The languid strumous abscess recovers of itself, like the acute, though much more slowly, when similarly treated, while the degenerated osseous tissue acquires again the characters of healthy bone.

And, lastly, as regards strumous disease of joints, I hope to show at King's College Hospital to-day the hand of a young woman who is under my treatment there, and illustrates the point to which I am anxious to direct your attention. She is a highly strumous person, who has had Pott's disease of the spine when a child, and whose wrist I excised about two years ago on account of caries of the carpus with sinuses. She came to us this time with great swelling of the other wrist and drooping of the hand from its normal position with regard to the bones of the forearm, implying that the disease had caused considerable softening of the ligaments. She also suffered great pain. It was a matter of the utmost importance for her that I should avoid, if possible, the excision of this wrist also; and as the skin was unbroken I determined to try the effect of free antiseptic incision. On doing this I found, to my great satisfaction, that suppuration had not yet occurred in the degenerated tissues; but on introducing a sharp spoon I observed that it passed readily into the articulation between the carpus and the forearm and brought out granulation tissue. Already were the tissues of the joint in a highly disorganised state, but the languid inflammation had not yet induced suppuration. That night the patient slept, having lost the uneasiness which previously deprived her of her night's rest, and we have now got the wound almost absolutely healed, while, by the careful use of splints, the position of the hand has been rectified. The swelling, too, has disappeared, and she bids fair to be soon added to the list of those in whom the hand has been rescued from excision by an early and free antiseptic incision, acting apparently on the same highly important principle of relief of tension. Here, too, you will observe, no attempt was made to extirpate all the degenerated tissues.

Two days ago we sent home a little boy who came to us with an exceedingly severe condition of "white swelling": gelatinous degeneration of the synovial membrane of the knee-joint. Sympathetically the bones also had become affected, and the ends of both the tibia and the femur were greatly enlarged. Suppuration, however, had not yet occurred. I cut down antiseptically into the joint on each side with great freedom, and also gouged extensively into the substance of the femur and tibia on the same principle as we trephine or gouge a chronic ostitis in the shaft of the tibia: and I have the satisfaction of sending that boy home with two minute superficial sores alone remaining unhealed, exposed in the windows of a water glass-case, with instructions to come once a week to be dressed, till healing shall be complete. The swelling meanwhile is almost gone, and we may now look upon that case as one of a knee rescued from excision, and in a far better condition as to promise of future usefulness than excision could have afforded. Such a result I should not have thought of aiming at had I been possessed with the idea that complete extirpation of the tissues which had suffered degeneration was essential to the cure of strumous disease.

I feel, gentlemen, that pressed as we are for time, I have dealt very inadequately with one branch only of the subject of our discussion. I can only hope that the facts which I have adduced may serve to remind some who have been led to entertain doubts upon the question, that, whether as regards the etiology or the treatment of inflammation, it would be a great mistake to disregard the influence of the nervous system.

[2] Trans. of the Pathological Society of London, vol. xxx., p. 557.

EXCISION OF THE TONGUE.[1]

BY WALTER WHITEHEAD, F.R.C.S.E., F.R.S. EDIN.,
SURGEON TO THE MANCHESTER ROYAL INFIRMARY, AND SURGEON TO THE MANCHESTER AND SALFORD LOCK AND SKIN HOSPITAL.

ON Nov. 3rd, 1877, I removed the whole of the tongue through the mouth with scissors, and in the *British Medical Journal*, Dec. 8th, 1877, p. 303, I referred to the case, and briefly described the method of operating. This case was then, to the best of my knowledge, the first instance of the entire tongue having been removed for disease through the mouth by simple excision. More than thirty tongues have, to my knowledge, since been removed by the same plan, and I now submit to the judgment of the profession the merits and the results of this operation. The operation has been most accurately described by Professor Lund in a paper read by him in May, 1880, to the members of the Manchester Medical Society, and subsequently published in the form of a small monograph by Messrs. J. and A. Churchill.

The operation is conducted after the following simple manner:—

1. The mouth is opened to the full extent with Mason's or any other suitable gag, the duty of attending to this important part of the operation being entrusted to one of the two assistants required.

2. The tongue is drawn out of the mouth by a double ligature passed through its substance an inch from the tip. This ligature is given in charge of the second assistant, with instructions to maintain throughout the operation a steady traction outwards and upwards.

3. The operator commences by dividing all the attachments of the tongue to the jaw and to the pillars of the fauces, after the manner suggested by Sir James Paget, with an ordinary pair of straight scissors.

4. The muscles attached to the base of the tongue are then cut across by a series of successive short snips of the scissors until the entire tongue is separated on the plane of the inferior border of the lower jaw, and as far back as the safety of the epiglottis will permit.

5. The lingual or any other arteries requiring torsion are twisted as divided. It is generally found that a moment's pressure with a small piece of sponge, held in sponge forceps, suffices temporarily, if not permanently, to arrest any bleeding; it is, however, regarded as desirable to twist, either immediately or after the tongue is removed, every bleeding vessel.

6. A single loop of silk is passed by a long needle through the remains of the glosso-epiglottidean fold of mucous membrane, as a means of drawing forwards the floor of the mouth should secondary hæmorrhage take place. This ligature may with safety be removed the day after the operation, and, as it is invariably a source of annoyance to the patient, it is always desirable to adopt this rule.

The after-treatment consists in feeding the patient for the first three days absolutely and solely by nutritive enemata, satisfying thirst by occasionally washing out the mouth with a weak iced solution of permanganate of potash, forbidding

[1] The substance of a paper read before the Surgical Section of the International Medical Congress, 1881.

any attempt at speaking, and requiring that all the wishes of the patient shall be expressed in writing, or by signs. The difficulties and dangers of the operation are few and more imaginary than real. Hæmorrhage, the *bête noire*, of most surgeons who contemplate removing the tongue, is in reality easily controllable, and frequently trifling. I have twice removed the entire tongue without having to secure a single vessel, and more than once have only had to twist one lingual artery.

The accompanying table shows that the tongue has been removed twenty-eight times with only one death as the immediate result of the operation, an old man aged sixty-nine (Case 29). Two other deaths occurred after the operation, but they resulted from remote causes.

In Case 10, a child aged two, tracheotomy had been considered necessary, as a preliminary safeguard before removing the tongue, and the child's death appeared to have more to do with the tracheotomy than with the operation on the tongue, inasmuch as the wound from the latter healed, whereas that of the former sloughed.

It will also be observed that Case 26 involved the removal of other important structures as well as the tongue. I have, however, felt bound in justice to include this case in my table. Taking, therefore, the most unfavourable estimate, the deaths in the twenty-eight cases do not amount to 11 per cent, and when contrasted with the 30 to 60 per cent. of deaths resulting from removal of the tongue by any other operation, I venture to affirm that substantial evidence has been submitted in favour of removal of the tongue with scissors by the method here described.

CASES OF REMOVAL OF THE ENTIRE TONGUE WITH SCISSORS.

No. of Case.	Initials.	Sex.	Age.	Date of Operation.	Name of Operator.	Place where Operation was Performed.	Result of Operation.
1	J. H.	F.	64	1877. Nov. 23	Mr. Whitehead	Manchester Royal Infirmary	Secondary hæmorrhage. Recovery. No return when last heard of six months after operation.
2	T. B.	M.	56	1877. Sept. 27	" "	" " "	Recovery. No return when last seen two months after operation.
3	E. C.	F.	34	1878. Jan. 12	Professor Lund	" " "	Discharged convalescent, Feb. 7th.
4	W. L.	M.	43	1878. Sept. 7	Mr. Bradley.	" " "	Left hospital convalescent, Sept. 21st.
5	T. G.	M.	—	1879. June 14	" "	" " "	" " "
6	—	M.	—	1879. Oct. 18	Mr. Whitehead	" " "	Convalescent in six days.
7	M. W.	F.	39	1879. Nov. 15	" "	" " "	Left hospital convalescent, Dec. 1st.
8	R. T.	M.	39	1879. Nov. 15	" "	" " "	" " Dec. 3rd.
9	J. H.	M.	—	1880. June 29	Professor Lund	Harpurhey, Manchester	Died Dec. 10th, 1880.
10	G. H.	F.	2	1880. Feb. 13	Mr. Whitehead	Manchester Royal Infirmary	Died March 20th, 1880. Asthenia. Removed for macroglossia. Case published by Mr. Maguire, *Journ. of Anat. and Phys.*, vol. xiv., p. 417.
11	T. S.	M.	57	1880. Feb. 25	Mr. Ewart	Higher Broughton	Died twelve months after operation. Recurrence in submaxillary glands.
12	J. D.	M.	—	1880. March 8	Mr. Whitehead	Manchester Royal Infirmary	Alive May, 1881, and free from return.
13	S. R.	F.	46	1880. March 22	Mr. Heath	" " "	Left hospital convalescent, April 15th.
14	H. W.	M.	58	1880. April 10	Mr. Whitehead	" " "	Discharged relieved, April 24th.
15	T. P.	M.	55	1880. April 19	" "	" " "	Discharged May 8th. Not a bad symptom throughout.
16	S. B.	M.	60	1880. June 12	" "	" " "	Alive March, 1881.
17	J. R.	M.	67	1880. June 19	" "	" " "	Discharged July 8th, and reported himself well three months after operation.
18	J. S.	M.	49	1880. June 23	" "	" " "	Left hospital apparently cured, July 8th.
19	P. K.	M.	57	1880. Sept. 24	" "	" " "	Left hospital convalescent.
20	J. W.	M.	50	1880. Sept. 24	Mr. Heath	" " "	" " " Oct. 15th.
21	W. C.	M.	43	1880. Nov. 5	Professor Lund	" " "	" " " Nov. 24th.
22	J. H.	M.	43	1880. Nov. 27	Mr. Whitehead	" " "	" " "
23	R. B.	M.	53	1880. Dec. 16	Mr. Hughes	Ashton-under-Lyne Infirmary	" " "
24	W. H.	M.	63	1880. —	Mr. Bartleet	The Birmingham General Hospital	Reported well three months after the operation.
25	—	—	—		Mr. Jolly	" " "	Died on the twenty-first day after operation.
26	W. B.	M.	51	1881. Jan. 22	Mr. Whitehead	Manchester Royal Infirmary	Tongue, floor of mouth, sublingual and submaxillary glands removed with scissors through incision below jaw. Death twelfth day. Septic pneumonia.
27	M. D.	M.	—	1881. Feb. 19	Mr. Jones	" " "	Left hospital convalescent, March 12th.
28	J. D.	M.	69	1881. Feb. 11	Mr. Lediard	Cumberland Infirmary, Carlisle	Died fourteen hours after operation, from shock.

I am acquainted with the particulars of two other successful cases of removal of the entire tongue with scissors in private practice, but for special reasons I am requested not to include them in this list.

In order to illustrate the few remarks I feel justified in making on cancer of the tongue and its treatment, I have selected two of the operations out of the twenty-four I have performed as being well adapted for my purpose. The first case was recorded by Mr. Maguire, and to him I am principally indebted for the following notes:—

John D——, aged fifty-two, living at Runcorn, in Cheshire, was admitted into the Manchester Royal Infirmary on February 19th, 1880. He was a boatman, and had been a great smoker. Previous to this illness he had very good health, although twenty-eight years ago he had gonorrhœa, and two months afterwards a chancre; he gave, however, no account of any secondary syphilitic symptoms. He was the father of seventeen children, three of whom were stillborn. There was no history of cancer in his family. Seventeen years ago he noticed a small warty growth on the tip of his tongue, and this gradually increased in size. Three years ago he noticed his tongue becoming covered with a whitish fur, while, for seven weeks, as he himself stated, a sore had been forming behind the warty growth, and this had increased to the size shortly to be mentioned. He had lost much flesh during the previous two months, and in the last six weeks had become deaf on the left side. At the left side of the extreme tip of the tongue and on the dorsal surface there was a small growth of a circular form, and about half an inch in diameter. This was slightly raised above the general surface of the tongue, and showed projections resembling filiform papillæ, the whole being covered with moist soft whitish scales. The mass was firm, and somewhat rough to the touch, but was not painful. Behind this was a circular sore, one inch in diameter, which reached from the left border of the tongue to a little to the right side of the middle line. It did not, however, extend to the under surface of the tongue. It was moist and bright red in colour, except in its centre, which was occupied by a whitish-brown slough. Its surface was granular, and its edges were everted and fungating. The tissue of the tongue near the ulcer was for a little distance swollen and hard. The inferior surface of the tongue was much swollen, hard, and tender to the touch in the region of the ulcer, but was not ulcerated. The general surface of the tongue from the tip to the level of the posterior margin of the ulcer was covered by whitish scales, that accumulated into a small mass near the posterior part of the ulcer. The tissue on the floor of the mouth was a little swollen, but did not feel hard. The patient had lost some teeth opposite the sore, but had no carious teeth. The glands beneath the tongue were felt externally to be enlarged but soft, but there was no enlargement of those at the angle of the jaw or in the neck. He complained much of pain, which shot up along the left side of the face to the forehead and ear, but never affected the right side. The pain was increased by eating and drinking, especially cold fluids. There was great salivation, especially (the patient said) when he sat up; he also described the saliva as tasting sweet. The breath was fetid.

On March 8th, 1880, I excised with scissors the whole of the tongue through the mouth. The arteries were twisted, and a silk ligature was left attached to the mucous membrane in front of the epiglottis. For seven days after the operation the patient was fed entirely by nutritive enemata. The temperature never exceeded 100°, and no pain was complained of by the patient. On the twelfth day after the operation the patient was sufficiently recovered to leave the hospital. The floor of the month was in a healthy state of healthy granulation. The patient could swallow fluids perfectly well, but could not masticate or swallow solid food. His sense of taste was perfect as far as could be ascertained. There was no glandular swelling of any kind in the neighbourhood of the mouth, and there was no pain in the side of the face. He could speak fairly well, making himself perfectly understood. The patient is alive and free from any return of the disease at the present time.

This case presents many points of clinical interest, and is of great pathological importance as presenting a somewhat rare combination of tumours of the tongue, and also as having afforded an opportunity for the examination of the so-called ichthyosis of the organ. Clinically the diagnosis of the three different growths was clear. The nature of the papilloma was evident from its form, its slow growth, and the fact of its having been stationary for such a lengthened period. The ulceration was inferred to be of an epitheliomatous nature from its position, its sprouting red granulations, and its everted edges in place of the clean cut borders usually met with in cases of syphilitic ulceration of the tongue. The patches of ichthyosis, or the leucomata, as Hutchinson calls them, were too typical to admit of doubt, and whether we regard the ichthyosis as a first stage of epithelioma, or as an independent disease, it is universally acknowledged to be at least a forerunner of the cancroid. The ichthyosis is evidently nothing more than a hypertrophy of the epithelium of the part, and is not related in any way to the disease of the same name occurring on the external surface of the body. The most important part of the microscopical examination was that which showed the epithelioma to be merely a further development of the ichthyosis, the hypertrophied epithelium of the latter disease extending into the submucous tissue, and forming the columns of cells of epithelioma. Although the disease in this case had not apparently extended to the glands, yet the cells of the lymphatics were seen to have assumed an epithelioid character, thus affording ample justification for the removal of the entire tongue.

Now, it so happened that I had admitted into hospital the previous day, February 18th, 1880, a man aged fifty-eight, suffering from almost precisely the same condition of tongue. He had a papilloma on the right side of his tongue, and on the left an ulcer with indurated and everted edges and red granulating centre. On the right side, in front of the ulcer, and extending to the under surface of the tongue, there was a patch about half an inch square of white, indurated, enlarged, and raised epithelium, possessing all the features of the so-called ichthyosis. The papilloma had existed thirteen months, the ichthyotic patch nine, and the ulceration two months. Although there was no distinct evidence of syphilis, he confessed to having had gonorrhœa twenty-seven years previously. He had been a great smoker from his youth, and had generally used a clay pipe. There were also decayed and broken teeth in the vicinity of the ulceration. His family history was good.

On April 10th I removed the whole of the tongue with scissors through the mouth. He made a rapid recovery, and left the hospital convalescent on the twelfth day after operation. He died, however, from recurrence of the disease in the submental glands on February 17th, 1881, ten months after the tongue was removed.

These two cases may be regarded as somewhat uncommon, and I look upon them as of extreme value in demonstrating the stages of transition from the healthy mucous surface of the tongue to that morbid condition which we term epithelioma. The mucous membrane of the tongue "is highly vascular, and consequently subject to activity of change, the natural epithelium passing through the phases of its life with singular rapidity." This vitality constitutes a surface intolerant of disturbing influences, controlled, however, by remote nervous, vascular, or constitutional conditions which affect the part for the time being; and as the hereditary tendency to cancer is probably owing to an increased susceptibility of the epithelium to irritation, it can readily be understood how the irritation of a rugged tooth or the friction of a clay pipe generally determines the site of the future epithelioma. When we regard the histological elements of the disease in its advanced stage, what more do we find than an exaggeration and multiplication of the normal epithelial tissues of a part extending beyond their original limits or penetrating into remote structures, and an excessive proliferation of the epithelial cells lining the alveolar walls and lymphatic ducts?

(To be concluded.)

ON A NEW SOLVENT FOR DIPHTHERITIC MEMBRANE.

By W. HALE WHITE, M.D.,

DEMONSTRATOR OF ANATOMY AT GUY'S HOSPITAL, LATE RESIDENT MEDICAL OFFICER AT THE EVELINA HOSPITAL FOR SICK CHILDREN.

I HAD been testing for some time the various solvents for diphtheritic membrane, such as lactic acid, &c., recommended in the text-books, and finding them all useless in practice I began to look about for new ones. It struck me that it might be quite possible to digest the membrane off the trachea and bronchial tubes. I accordingly procured a supply of Messrs. Bullock's acid glycerine of pepsin, in readiness for any case that might occur. With Dr. F. Taylor's permission it was tried in a patient under his care, and the following are brief notes of the case.

Louisa D——, aged two years and a half, was first seen at the Evelina Hospital on the morning of July 5th, 1881. The mother said the doctor told her the child had a croupy cough; but as there was no lividity or sucking in, and the child lived opposite the hospital, the mother was told to bring it directly it got worse. Accordingly the next morning she brought it, and it was admitted. There was extreme lividity, sucking in, and dyspnœa. I performed tracheotomy immediately (high operation). Instant relief was afforded, and the back of the trachea was inspected, but no membrane was seen. Accordingly a silver tube was put in, and the child did well till the evening of the 7th, when a small piece of membrane was coughed up. I therefore sprayed the throat with a Siegle's spray, putting half an ounce of the glycerine of pepsin in the glass bottle. This was done every two hours. On the morning of the 8th, as very little spray could be got down the tube, I put in Mr. Golding-Bird's dilator (which the child continued to wear till the india-rubber tube was put in) and pulled up several pieces of membrane, and continued the spray. This treatment was continued till the evening of the 10th, when, as no membrane had been coughed up for twelve hours, it was left off. It was the opinion of all who saw the pieces coughed up that they had a very soft and gelatinous character compared to the thick, tough pieces of membrane usually expelled. The case was a very bad one, as is shown by the fact that the quantity of membrane coughed up was very great, by the temperature rising to 104°, the child suffering from vomiting and diarrhœa, and also by its having a severe attack of syncope, from which it was with difficulty roused. An india-rubber tube was introduced five days after the operation. This was soon left off. The child continued to do well; but unfortunately some time after, owing to sudden changes in the weather, it got broncho-pneumonia, and died. At the post-mortem examination there was no evidence whatever to show that the pepsin had any ill effect at all upon the lungs, bronchial tubes, or trachea.

The pepsin was got to its active temperature by being immersed in water at 110° F. before use. I found that the water coming as spray from the boiler was not hot enough to destroy the activity of the pepsin, and as the child had a steam kettle attached to the tent the air in the trachea did not cool it. Of course the steam kettle was removed during the application of the pepsin. I do not think the chief good was done by the action of the pepsin on the large pieces of membrane lining the trachea and larger bronchi, but by its getting thoroughly mixed with the secretions in the small tubes and preventing the formation of membrane there, for it is always found post mortem that it is the blocking up of these that has killed, provided the child has died simply from the effects of the membrane without any complication.

It may be mentioned that anyone can convince himself of the power of the glycerine of pepsin to dissolve

diphtheritic membrane by putting a piece in a test tube with some of the fluid, and maintaining it at a temperature of from 100°-110° F., when it will be seen to be digested rapidly.

I should not think of publishing the results of a single case were it not that I shall not for a long while have an opportunity of trying pepsin again, and by publishing this I thought others might be led to try it; and if in a larger number of cases it be found useless it can be put aside with the rest of the so-called solvents. If not, it can come into general use.

Messrs. Bullock and Co., of Hanover-street, who have shown the greatest kindness in helping me, have prepared a solution of pepsin without so much glycerine as that ordinarily sold by them. The advantage of this is that it passes more readily through the fine tubes of the Siegle spray. They require four days' notice to prepare this special form.

Carshalton.

CASE OF GALVANO-PUNCTURE IN AORTIC ANEURISM; SUCCESSFUL RESULT.

BY RICHARD CANNON, L.K.Q.C.P., L.R.C.S.I.,
M.D. UNIVERSITY OF CHILI, LATE SURGEON R.N., ETC.

G. T——, aged forty-two, a publican, a native of the north of Ireland, a resident in Valparaiso for many years, not given to habitual intemperance, with a rheumatic history, tall, of spare habit, with closed pupil and opaque lens capsule in right eye, applied to me towards the middle of the year 1879, complaining of pain to the right side of the sternum in the parietes of the thorax, accompanied by a dry cough, and a feeling of tension, with pain shooting to the shoulder-joint. I diagnosed aneurism of the aorta, about the origin of the arteria innominata, and based my diagnosis solely on the feeling of increased pulsation, and the accentuation of the heart sounds in the aorta, as there was no bruit to be heard, no dyspnœa, aphonia, or dysphagia; no difference in radial pulses, no pupillary evidence, nothing but an exaggeration of the hæmic impulse in the aorta, accompanied by pain. I prescribed twenty-grain doses of iodide of potassium three times a day, and applied a belladonna plaster over the chest wall where the pain was felt. I also put the patient on a diet restricted as much as possible as to liquids. The only cause to which I could attribute aneurism was increased tension applied to an artery weakened at some former period by rheumatic inflammation. This tension was perhaps brought about by the frequent efforts required in drawing corks. Anyone who has drawn a tight cork knows the powerful strain brought to bear by this act on the arteries when the chest muscles are all fixed, and we find that apoplexy has not unfrequently resulted from such efforts.

Under the treatment indicated, and with the occasional use of sedatives, the cough was relieved, but recurred occasionally, and a continuous feeling of tension remained in the chest, with intermittent pains. I endeavoured to discover increased friction by observing the profile of the chest, and by fastening to the chest wall by wax a small flag, and watching the shadow projected by this on the wall of the room. Still, the diagnosis was very doubtful, and I sent the patient to my friend George F. Cooper, Esq., surgeon to the British Naval Hospital, who more or less endorsed my opinion, and concurred as to the treatment adopted. Things went on in this way until the month of September, 1880, when, after an absence of a month, I was called to see the patient, and, to my regret, found the diagnosis confirmed by the presence of pulsating tumour between the second and third ribs, about an inch to the right of the sternum. The tumour was about the size of half a small walnut, flattened and pulsating strongly, almost synchronously with the heart. The skin over the swelling was reddened, almost purplish in hue, thinned and evidently rapidly about to give way; the pulsation was only too evident, and raised forcibly the head of the auscultator, who felt too well the heavy thud of the blood rushing from a hypertrophied heart against the frail barrier which separated the patient from the tomb.

A slight systolic murmur was now audible over the aortic valves, and this was propagated up the vessel into the tumour. Pain had diminished owing to the pressure being now exercised more in the soft, yielding coverings of the intercostal space than in the ribs. I now prescribed complete rest, and applied the poles of a twenty-cell Stöhrer constant current battery over the tumour for twenty minutes. This was repeated at intervals of a few days until the surface touched by the negative pole became blistered. The iodide of potassium and dietetic treatment were continued. No improvement took place, and the walls of the tumour were daily becoming thinner and more prominent. My friend, Dr. E. T. von Schröders, a distinguished physician here, saw the case, but demurred to the treatment by galvano-puncture which I proposed, owing to the unfavourable statistics hitherto shown in Europe.

As the tumour was on the point of giving way, I explained the case fully to the patient, and asked Mr. Cooper to assist me. This gentleman fully concurred in my opinion that galvano-puncture was the only treatment left which offered any hope of saving the man's life. Accordingly, on the 1st October, 1880, assisted by Mr. Cooper, I introduced two gilt needles, insulated within an inch of their points by gutta-percha recently applied, at one inch apart, into the tumour, and passed for twenty minutes a current of eight cells Stöhrer, gradually increased at one minute intervals to twelve cells. The needles were passed about an inch and a quarter into the blood-current and kept steady. The patient, a man of heroic courage, was laughing and jesting during the operation, so much so that I had to chide him. He said he was quite aware of his danger, and if he were to die on the spot was contented and fearless. No burning or other uneasiness was felt during the presence of the needles in the tumour; no increased redness of the skin was produced; no corrosion of the needles took place (fine steel gilt needles, furnished by Yeates of Dublin). On withdrawing them I covered the punctures with collodion. I then applied the poles of the battery with moistened sponge to my forehead, and was surprised to find that the current was so weak as to be scarcely perceptible. The battery had, in fact, become weakened by previous use, and, owing to some dirt in the connector of the commutator, its action had become almost *nil*. So that, to be perfectly frank, I must admit that any good resulting in this case was due in great measure to the physical coagulation of fibrine round the needle points, independently of the little electrolytic action exercised by such a weak current. I had no galvanometer to test the exact strength of the current. However, I continued the medicinal and dietetic treatment, and as the patient felt no uneasiness, I left him undisturbed for some ten days, and at the end of that time met my friend Cooper at the bedside, when he exclaimed, "By Jove, there is a great improvement here!" and, to my agreeable surprise, I found the tumour perfectly hard, flattened down to the ordinary chest level, the pulsation had disappeared, the redness of the surface had gone, all the symptoms of threatened perforation had vanished, and the patient felt perfectly comfortable, without pain, without cough, without pulsation, except a general expansile fulness evident on pressing the open hand over the chest wall, and which caused him no inconvenience. The bruit had also disappeared. Under these circumstances I prescribed perfect rest for some weeks, and continued the iodide of potassium at intervals, with a generally restricted diet, limiting as much as possible the amount of liquids taken by the patient.

Eight months have passed away. The patient declares he never felt better; he pursues his ordinary avocations both in and out of doors; suffers from slight dry cough at times, but feels capable of any exertion. I warn him occasionally to be careful and to take less whisky, but the temptation of frequent "calls to the bar" are too much for him, and I fear some day alcoholic excitement and anger may bring matters to a catastrophe. I do not pretend to have completely cured this patient, for aneurismal enlargement of the aorta undoubtedly still exists; but what I do claim for the needles is, that by their use I warded off imminent death, and prolonged the existence of this patient up to the present in a condition of usefulness and comfort.

Valparaiso.

COOMBE LYING-IN HOSPITAL, DUBLIN.—A donation of £1500 from a Mrs. Tighe has been received by the governors of this hospital, and it has been resolved that a ward in the institution shall be named "The Robert Tighe Ward," in commemoration of the generous gift.

THE PHENOMENA OF DOUBLE VISION AND DOUBLE TOUCH.

BY SURGEON-MAJOR T. OUGHTON, A.M.D.

IT is not an agreeable task to attempt to confute the recognised theories of eminent physicists in the elucidation of certain well-known visual and tactual phenomena; but nevertheless it is a conscientious duty on the part of one who may discover that his experiences and investigations are not in accord with those so laid down. All experience and reasoning concerning the perception of direction and kindred perceptions, as of apparent distance, apparent relief, &c., have served to convince the author of this brief article that they arise from and are initiated by voluntary muscular contraction, and this whether in the case of vision or of touch; there does not exist a single instance of sense-perception in which it can be proved satisfactorily to him that a special nerve of sense has any office other than that of presenting to the mind an external entity, together with any attribute it may possess that is intrinsic and irrespective of perceptions springing from position. But, furthermore, physiologists have admitted that the perception of one form of apparent motion can only be determined by muscular contraction, as when the eyes follow the flight of a bird; and what is apparent motion but a modification of apparent direction? So that it would seem to be really a scientific project to reduce all like perceptions to one common standard of causation. This has already been my aim in the treatment of "erect vision,"[1] wherein it was indicated that images on the lower retina were influenced in their apparent direction by the recti superiores, and images on the upper retina by the recti inferiores, such results being dependent on the centres of motion of the ocular globes being intermediate between the retinal expansions and the insertions of these muscles respectively. One of the most readily interpreted phases of double and single vision tends to confirm the truth of the above indication, which is comprised in the statement that "any visible point or points whose ocular images are non-coincident with the retinal equators or with corresponding lines that are parallel thereto, are seen to be apparently duplicated, whilst images that are so coincident are (subject to conditions to be noted hereafter) seen as single." For example, if the corresponding images of objects in an ordinary stereoscopic slide be united by straight lines, it will be observed that such lines are parallel to each other and to the median straight line (this actually represents the retinal equator in the eye), hence they are seen single.

Let us examine the case of one such pair of images, situated, say, six degrees below the retinal equators. It is evident that the directive influences of the superior recti muscles will be equal in respect of both the images; hence these images are seen single because of the sympathetic "consent" that is in operation between the said muscles in respect of them. Further, any such pair of images give rise to a single binocular resultant, and by virtue of the muscular consent that is evidenced in the upward and downward movement of the eyeballs. Without this consent the image of a visible object might be six degrees below the retinal equator of one eye and twelve degrees below that of the other eye, so that the object would suffer an up-and-down displacement. It would be seen to be visually doubled because the directive influences of the superior recti would be necessarily unequal in respect of its images, and necessarily so unequal on account of the mechanically horizontal disposition of the bony orbits.

All this simplicity vanishes in the binocular vision of objects that are laterally disposed, and complexity is the result of the eyes being placed on different planes in relation to these objects, instead of in a uniform plane as in upward and downward vision. Muscular consent, to a degree, most certainly exists between the lateral movements of the eyeballs, and it may be laid down generally that the operation of this consent is causative of the single vision of objects in the lateral field, whilst non-consent implies double vision. But before proceeding further it is necessary to mention the conditions of single and double lateral vision as I have found them, whereon to base a legitimate inquiry—namely:

First, every visible point that is contained by the angle of binocular convergence or its extension (the opposite angle) is seen to be doubled. Most surrounding objects are seen double during the abnormal act of squinting. I maintain that this is consequent on the great magnitude of the above angles during strabismus.

Second, every visible point that is contained by the exterior (lateral) angles of binocular convergence is seen single; hence most of the points of binocular vision are ordinarily perceived to be single on account of the magnitude of these angles being normally so great. I am well aware of the statement of Sir D. Brewster, reiterated by Le Conte in a very recent publication, that only one visible point (the point of binocular convergence) is seen single, and that the mind takes no cognisance of one of the duplicated spectra of other visible points. But, apart from the differing experience of Professor Wheatstone and other eminent witnesses (my experiments agree therewith), it would be well for the upholders of the foregoing tenet to explain wherefore it happens that duplicated spectra when present, as during strabismus, are so clearly defined.

Granting that the above conditions represent the reliable facts of binocular vision, it will be found that the following propositions appertain and are applicable to them—namely: (1) Images of external objects on the inner lateral halves of the retinæ are influenced in their apparent direction by the recti externi vel abductors, and images on the outer retinæ by the recti interni vel adductors. (2) Muscular consent is operative between the rectus externus of an eye and the rectus internus of the other eye, and this in so far that the contractions of these two sets of muscles agree in determining that an object shall be seen "to the right" or "to the left" of the median line of vision. Muscular non-consent, on the other hand, is operative between the two internal recti, because the contractions of these muscles determine that a lateral object shall be perceived both to the right and to the left of the median line of vision, and, for a like reason, there is a non-consentual operation between the two external recti—that is, inasmuch as the contraction of the right external rectus determines a direction to the right, whilst that of the left external rectus determines a direction to the left. (3) The images of a visible object that is contained by the angle of binocular convergence find themselves on the external retinæ, are amenable to the directive influences of the internal recti, and are seen double; the images of an object that is contained by the extension of the above angle find themselves on the internal retina, are amenable to the directive influences of the external recti, and are seen double; the images of an object that is contained by the right exterior angle of binocular convergence find themselves on the external retina of the left eye and on the internal retina of the right eye, they are amenable to the directive influences of consentual muscles—viz., the left internal rectus and the right external rectus, and are seen single; and, lastly, the images of an object in the left exterior angle have their *locus standi* on the left internal retina and the right external retina, both images are influenced by muscles which determine a direction "to the left,' and the representative object of these images is seen with a single contour.

It has thus far been indicated that the absence of a vertical displacement of ocular spectra in double vision may be explained by the perfect consent subsisting between the two elevator and depressor muscles of the eyes respectively; and, further, that lateral displacement of ocular spectra (to right and left) in double vision is due to the non-co-operation subsisting between the lateral muscles of the eyes in respect of any given pair of retinal images of a single object, whilst single vision is a resultant of the co-operation between these muscles in respect of a pair of retinal images.

But such directions as "to the right" and "to the left" have no significance whatsoever excepting in so far that they be related to a recognised median direction, since a median position serves as a *point de départ* for all diverse directive perceptions. Thus, the median line of monocular vision corresponds with the optical axis, and is dependent on the play of the entire system of the ocular muscles on the punctum of the retina. Again, the median line of binocular vision corresponds with a line joining the encephalic centre of perception with the point of binocular convergence, and is dependent on the consentual play of the entire system of the ocular muscles of both eyes *inter se*. There is apparently a marked consent subsisting between the internal recti when the eyes converge on a given object, but this is deceptive; the right internal rectus, for instance, determines an object being seen to leftwards of the median line of monocular vision, whilst the left internal rectus determines an object

[1] Vide THE LANCET, March 17th, 1877.

being seen to rightwards of the monocular median line; there is, moreover, a coalescence of the two median lines of monocular vision for the formation of the median line of binocular vision; so that, as has been already indicated, the two internal recti are non-consentual muscles. Neither, lastly, should it be overlooked that there is a main directive median line proceeding from the encephalic centre of perception directly forwards; this is not of visual origin, being determined by the tactual muscles regulating the position of the body. When the eyes are converging on some object on the right side of the body, the median line of binocular vision is inclined at an angle to the main directive line; the main directive line, however, has no bearing on the phenomena of double vision, these being definable as being the relation that ocular spectra hold to the median line of binocular vision.

Before concluding with a recital of the details of such phenomena it will be expedient to treat of "double touch," inasmuch as the singular experience bears precisely the same relation to the special tactile sense that double vision does to the visual sense. Proning the right hand let us place two marbles in contact with the right and left margins of the index finger respectively; one of the marbles will be perceived to the right by the agency of the muscle moving the finger in this direction, the other to the left by the muscle moving the finger to the left, and the median line to which these diverse directions are related will be none other than a line bisecting the finger longitudinally.

In the well known experiment of double touch, the median directive line is one proceeding from the web of the index and middle fingers so as to separate them. The small marble is in contact with the right margin of the middle finger, which is under the directive influence of the muscle moving this finger towards the right, and it is in contact with the left margin of the index finger, which is under the influence of the muscle moving this finger towards the left. Since, therefore, the single marble is under influences determining directive perceptions both to the right and to the left, and seeing that these diverse directions hold relation to a median line that is common to both fingers, it will follow that there must be the perception of two marbles, as in the experiment with two actual marbles in contact with the index finger.

But, returning to a practical consideration of the facts of double and single vision, let us treat of them thus:—

First, as regards an object that is contained by the angle of binocular convergence, it will be seen to the left of the median line of the right eye and to the right of the median line of the left eye. These duplicate median lines of monocular vision become resolved into the single median line of binocular vision, and the object is under influences which determine directions both towards the right and towards the left; consequently, as with the marble, there will be a duplicate resultant perception.

Secondly, with regard to an object that is contained by the extension of the above angle, it is seen to the right of the median line of the right eye, to the left of the median line of the left eye, and both to right and left of the median line of binocular vision—i.e., duplicated.

Thirdly, with reference to an object that is contained by either of the exterior angles of binocular convergence, it will be seen to the right of the median line of the right eye if it be seen to the right of the median line of the left eye, and thus it will be seen to the right of the median line of binocular vision. So, similarly, with regard to an object that is seen to the left of the median line of each eye, it will be seen to the left of the median line of binocular vision.

Lastly, let us suppose that an object is seen four degrees to the left of the median line of the right eye, and eight degrees to the left of that of the left eye, it will be seen single and along a line of visible direction that is six degrees (the mean) from the median line of binocular vision, and this mean angle of six degrees will be formed at the encephalic centre of perception. There is, under these circumstances, the same composition of directive forces that is evidenced when the eyes are made to converge on a lateral object in the field of vision. Let the eyes converge on an object that is six degrees to the right of the main median line of direction; the left eye may perceive the object eight degrees to the right of the main line, and the right eye four degrees; but binocular vision will give it its correct value of six degrees, by virtue of muscular co-operation and the agency of the aforesaid directive composition.

New Kent-road, S.E.

REMARKABLE CASE OF

PERIODICAL PEELING OF THE CUTICLE.

By A. CHEVALLIER PRESTON, M.R.C.S.

THE following interesting case, which occurred in my practice, is, I think, worthy of being placed on record.

M. J——, aged sixty-seven, a fairly nourished woman, of fair complexion, a native of Gloucestershire, came under my care in July last. The complaint from which she was then suffering was of old standing; but she stated that she had with this exception enjoyed good health from childhood. The only serious illness had been small-pox at the age of two years, and she has a large bronchocele, which developed at the age of puberty. Subjoined is the history she gave me of her present illness, which is, according to her statement, identical with what she has suffered at intervals since childhood. At intervals of a month or six weeks the following occurrences manifest themselves:—After a day or two of slight feeling of malaise, the skin of every part of the body comes away in "casts," and the cuticle, which separates from the extremities, does so in one entire and sometimes unbroken piece, resembling a "glove" or "stocking." The new skin beneath has the appearance of ordinary skin after desquamation, and "lasts her," to use her own expression, for several weeks, when it begins to get irritable and inflamed. She has lately been going through one of these "changes," and I have had the opportunity of watching her daily. The first time I saw her, a week before the final "casting off," she was feeling unwell, and told me she was expecting a change of skin, and begged me to give her no medicine, as she had found that certain medicines that were prescribed for her at this stage made the skin fall off more thickly, and caused her pain, by leaving only a thin covering all over the body; at least, this was her experience. She was then suffering from slight rheumatic pains in her left elbow, for which I prescribed an anodyne liniment, which relieved her; but she was not able to continue it, as the peeling commenced where the liniment was applied, and the new skin was too tender to bear it. She was kept in bed, being cold weather, and in three days the desquamation became general; the skin of her nose, ears, and hands coming off as complete casts. The desquamated skin is of the thickness of the ordinary cuticle, and in places it is as tough as the lining of a hen's egg, and I have preserved the covering of the hands and feet in spirit. Now that the skin has come off she expresses herself as "quite well" again, and is able to get about, feeling far more comfortable in the new skin than in the old one. I questioned her closely as to her previous history and could gather nothing from it to throw any light on the cause of this extraordinary phenomenon. She has had a large family, and has healthy children; none of them having any appearance of her idiosyncrasy. The state of her menstrual functions was always good up to the change of life, seventeen years ago, and she did not associate this occurrence with the menstrual flow at any time, unless by accident. She states that she first remembers an attack of this kind at the age of seven years, and she was afterwards told by a medical man that it was from "catching cold after the small-pox." The phenomena of this disease are so unfamiliar to me, that I shall welcome any hints as to diagnosis, etiology, and treatment of the case.

Amberley, Canterbury, N.Z.

CASE OF SEVERE CUT THROAT;

WITH SOME REMARKS ON THE ADMINISTRATION OF NUTRITIVE ENEMATA.

By S. J. RENNIE,

SURGEON, ARMY MEDICAL DEPARTMENT; LATE CIVIL SURGEON IN CHARGE OF THE 10TH BRIGADE DEPÔT, ASHTON-UNDER-LYNE.

W. T——, aged forty-three, a private in the 96th Regiment, of twenty-one years' service, a man of intemperate habits, and who had previously suffered from syphilis, having lost the greater portion of his palate from necrosis, was admitted to the Station Hospital, Ashton, on Sept. 27th, 1880, at 7 A.M., he having been found in a state of syncope, in one of the latrines, with his throat cut.

On examination of the wound it was found to extend from the posterior border of the left to the anterior border

of the right sterno-mastoid muscle, across the crico-thyroid membrane, dividing the larynx completely and opening the œsophagus. The left external jugular and several other large veins were divided, as well as one or two large arterial branches, and the patient was in a state of profound syncope from the very profuse hæmorrhage that had occurred. An enema of brandy was at once administered and the vessels secured, sutures also being introduced on each side of the wound to bring its gaping edges nearer together, but not so as to close it over the trachea. He was then stripped and put to bed, with hot-water bottles, &c., when it was found that he was suffering from phagedænic chancroid, the penis having almost sloughed off. He had concealed his disease for four months, and this was afterwards found to be the cause of the rash act. A tent was then erected over his bed, which was placed before the ward fire, and steam introduced beneath its folds, and this was kept constantly going till the wound was entirely healed. The throat was well cleansed with carbolic lotion and dressed with a single layer of carbolic gauze, laid lightly on, and changed frequently, and the penis enveloped in a charcoal poultice. He was fed during the remainder of the day and night by specially prepared nutritive enemata, the preparation of which I shall draw attention to afterwards. Evening temperature 97° F.; pulse 65, feeble. Ordered one-third of a grain of morphia hypodermically.

Sept. 28th: The patient slept about three hours; had expectorated large quantities of clot and bloody sputum. Temperature 99·5°. Ordered seven ounces of brandy, two pints of milk, two eggs, and three pints of beef-tea, which were administered in portions four times daily by the stomach-pump, and this was done regularly till he was able to swallow, the only additions made being a little arrowroot and raw steak shredded in the beef-tea. Throat dressed. Evening temperature 99°. Repeated hypodermic injection.—29th: Slept fairly well. Temperature 99°; pulse 80. Bowels not opened. Ordered one ounce of castor oil, which was given along with food. Wound commencing to granulate at edges. Evening temperature 100°. Repeated hypodermic injection of morphia.—30th: Slept some hours. Bowels opened twice. Fed and dressed as usual. Evening temperature normal. Repeated hypodermic injection.

On Oct. 1st the wound was brought closer together by stays of strapping, which depressed the chin on the chest. The patient felt better. Ordered black lotion to penis, and ten grains of ointment of mercury to be rubbed into the inside of the thigh twice daily. Evening temperature normal. Morphia discontinued.

The same treatment was pursued till Oct. 10th, when, his mouth beginning to get sore, he was ordered instead ten grains of iodide of potassium twice daily, to be given with food. Black lotion to be continued. Penis looks much better, and throat is healing rapidly, the treatment now adopted being the protection of the wound by the layer of gauze and the free use of Condy's fluid lotion to remove secretion as soon as formed.

The patient progressed favourably till Oct. 24th, when he had a sharp attack of acute pneumonia of the left lung, which was treated by constant poulticing, and quinine in pill, which was introduced, by the aid of a pair of forceps, through the wound into the œsophagus. Iodide discontinued. This lasted till the 29th, when the expectoration became of a bronchitic character, and the temperature fell, redux crepitation being heard, and the chest sounds becoming gradually normal during the following days, with the exception of some bronchitic sounds which have remained up to the present. On Nov. 3rd the iodide was resumed. Cough and expectoration improving; wound in œsophagus healed; able to swallow a little milk. On the 5th the external wound was nearly healed. On the 10th the wound was healed; steam discontinued. On the 15th took a little solid food; swallowed liquids easily; use of stomach-pump discontinued; tent round bed removed; penis healed, leaving a fistulous opening in urethra, about two inches from meatus, and the whole thickness of the corpus cavernosum of the right and part of that of the left side sloughed away and cicatrised for about an inch. Iodide discontinued, and ordered five grains of citrate of iron and ammonia with water, three times a day. Ordered also chicken diet and two pints of porter, as well as three ounces of brandy. On the 17th allowed up. Cough rather troublesome. Ordered a linctus of squill and morphia (one-thirty-sixth of a grain to the dose). Slight pain on left side.

December 1st.—Cough much better. Gradually gaining strength.—Dec. 30th: Convalescent. Cough almost gone; able to go out and take exercise. Passes urine both by fistula and meatus. Catheter passed occasionally to prevent stricture at fistula. Wound in throat perfectly cicatrised. No signs of any stricture in œsophagus. Gaining flesh rapidly.

Remarks.—The remarkable feature of this case was the patient's recovery after so severe an injury, complicated as it was with pneumonia, and occurring in a constitution so vitiated by climate, intemperate habits, and syphilis. The fact of his having suffered from chancroid for four months, which had pulled him down fearfully, and the enormous loss of blood he sustained, must also be taken into consideration. As to the penis, I had thought at first of removing what remained to facilitate matters, as it seemed that ultimately it would be entirely lost by sloughing. Later I had also intended to attempt the restoration of the urethra by a plastic operation, but taking into consideration the amount of cicatricial tissue in the neighbourhood, I came to the conclusion that this was not feasible. With regard to the specially prepared enemata mentioned in the case, I have been in the habit of giving these on several occasions with marked benefit; the rectum tolerating them for a much longer time than it will ordinary nutritive enemata. Their preparation is based upon the ground that the rectum and colon have no power of assimilation, only of absorption, and that to a limited extent. It is therefore necessary, to reap the full benefit from these injections, that they be assimilated previous to their introduction into the bowel, and this is effected by converting their albuminoid constituents into peptones by digestion with an artificial gastric fluid. The rough-and-ready method I have adopted for this purpose is to take a basin of good beef-tea, into which half a pound of lean raw beef-steak has been shredded, and at a new-milk temperature to add one drachm of fresh pepsina porci and half a drachm of dilute hydrochloric acid. This I place on the hob of the fireplace, and let it remain four hours, stirring frequently. It is then in a fit condition for use, and may be introduced in such quantities and at such times as may be considered desirable. Sometimes, however, a little more pepsine is required, which may be ascertained by examination with a spoon. It is necessary to see that the heat does not become too great, as then the process is stopped altogether, and it is better to have it too cold than too hot. If alcohol is to be given along with it, it should not be added till the last minute. Eggs may also be added, having been previously well beaten. I have, as I said before, frequently given these enemata with good results, and I can confidently state that they are well worth a trial by anyone who has a suitable case under his care.

STAB IN THE GROIN; LIGATURE OF THE COMMON ILIAC; GANGRENE; DEATH.

BY THOS. WM. WALSH, F.R.C.S. ENG.

Now that both the gentlemen associated with me in the following case are dead, I may without impropriety offer the same for publication.

On Sept. 28th, 1878, I received a telegram (without specifying the nature of the case) to meet Dr. E—— in consultation fourteen miles off. On arriving I found that Mr. B——, aged twenty-two, had been stabbed in the left groin twelve days previously. Dr. E—— stated that he had ligatured the external iliac, but that arterial hæmorrhage was constantly recurring on the removal of a large pad which was placed over the lower part of the abdomen; that he had a few days previously made another attempt to tie the bleeding vessel, but that the hæmorrhage was so alarming that he immediately desisted.

The patient was much exhausted, yet the only hope of saving life was to arrest the hæmorrhage, and I therefore recommended that the wound should be enlarged and search made for the bleeding vessel. To this all parties assented. Having only my pocket case with me, I extemporised an aneurism needle, with an eye probe securely fastened on a hook tenaculum. On enlarging the wound and removing a considerable clot, the blood immediately jetted out with much force, but by compressing the aorta I was enabled to discover that the bifurcation of the iliac was wounded.

Without much difficulty I ligatured the common iliac, and all bleeding ceased.

The patient was replaced in bed and some nourishment and stimulant given. I enveloped the leg in cotton-wool and flannel, and in an hour he had considerably rallied. On Sept. 29th he slept fairly, and seemed in every respect going on favourably, the leg maintaining its warmth.

He continued to progress well till Oct 1st, when symptoms of gangrene appeared, and on Oct. 3rd he gradually sank and died.

The above history needs no comment, as it is evident what ought to have been done at the very first, and with youth in his favour it is more than possible that Mr. B—— might have recovered, for he showed great vitality to the last.

Worcester.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

THREE CASES OF UNUSUAL DEFORMITY OF ANUS.

(Under the care of Mr. JOHN H. MORGAN.)

A MALE child, aged six months, was taken to the hospital on account of the pain which he suffered whenever motions were passed. The pain was such as to cause the child to cry continuously before and after the bowels were relieved. The body was well-formed and otherwise healthy, but on examining the anus, which was of usual size and in proper position, there was found to be a band of tissue passing from a point corresponding to the apex of the coccyx to the median raphe of the scrotum, with the posterior extremity of which it was continuous. The band was about three-quarters of an inch long, and was attached at both ends, the remainder forming a thick free cord which lay below the aperture of the anus, while from the centre of this band there ran a small branch of similar tissue, which was attached to the skin of the left buttock, and was about half an inch in length. The skin which covered the central band exactly resembled that of the scrotum, shrinking and contracting upon stimulation, and it was so placed that any matter passed per anum must cause it to be stretched, thus accounting for the pain which attended every relief of the bowels. The whole band was removed by cutting the attached ends with scissors. The wound healed at once, and the child was relieved of all pain.

A male child, aged four months, was seen at the hospital, and the following history was given. There were four older children, all healthy. The mother believed that this child was born a fortnight before his time, but he had thrived well, and was now a healthy, well-made boy. When born he was small, and cried continuously for the first four days. From the Wednesday night when he was born until the following Saturday there was no motion passed, and the child was then seen by a doctor, who found that the anus was not patent, but closed by a membrane. Soon after this the membrane gave way, and a very copious motion was passed. The child continued to suffer pain when the bowels were relieved. On examining the parts, there was seen a small thick band passing from the median raphe of the perineum in front to the depression between the buttocks posteriorly, and broadest behind. At a spot corresponding to the anus on either side of the band was a depression; that on the right side was patent, and admitted a probe to pass into the anus; that on the left side, though similar in appearance, proved only a cul-de-sac. Motions passed freely, but caused much distress. The band was snipped off, and the child was relieved of pain.

A girl, aged seven months, was brought from the country on account of a deformity of the anus. She was the fourth child of young and healthy parents and was plump and well-formed. She was three months old before it was noticed that the "back passage" was not naturally formed, but no difficulty was then observed in passing the fæces, which were of natural colour and consistence. On examination the following condition was found to exist. At the usual spot for the anus was a depression, and the parts around were so far natural that the skin was pigmented and puckered, but there was no communication with the rectum. The spot at which the fæces made their exit was in the middle line about half-way between this depression and the posterior commissure, but nearer the latter than the former. The opening was very small, and a probe passed up it showed that there was plenty of tissue between the passage and the vagina. Operation was deferred in order that the child's health might not be interfered with; but a few months later she was brought to the hospital as the bowels had been constipated and the passage of a motion caused pain, and on one occasion blood had been found to follow an evacuation. The child was placed under the influence of chloroform and the sphincter freely divided by cutting forwards from the tip of the coccyx, through the anal depression to the posterior edge of the abnormal opening. Stitches of catgut were passed through the mucous membrane, and this being freed from its attachments was sewn to the edges of the depression in the natural position. There was very little bleeding, and the child did not suffer from the operation. Two days subsequently a motion was passed without pain, and the child has had no subsequent trouble, the anus being now in the proper position.

ROYAL SOUTHERN HOSPITAL, LIVERPOOL.

THREE CASES OF EXCISION OF THE KNEE, WITH REMARKS.

(Under the care of Mr. RANSFORD.)

CASE 1.—T. M——, aged twenty, was admitted on August 28th, 1878, for a bad burn. It was then seen that his left leg was much atrophied as the result of old disease of the joint. He had been under the care of a noted bone-setter when ten years old, who had not fixed the joint, and as a consequence, when he was admitted, the tibia and fibula were displaced backwards and rotated outwards, and firmly fixed there. The condyles of the femur projected, and at the end anchylosed to them was the patella. On the inner side the leg was marked with numerous cicatrices, from his description probably the situation of old sinuses.

On October 14th the whole of the condyles of the femur were removed with the attached patella and a thin slice from the tibia, then the tibia and fibula were brought forward and fixed in a straight line with the femur by Mr. Howse's method ("Guy's Hospital Reports," 1877). The operation was performed with the usual Listerian precautions, and dressed with carbolic gauze, &c. In the evening of the same day rather severe hæmorrhage came on. The dressings were taken down under the spray. No vessel could be found, but it appeared to be due to a general oozing, so two or three sponges wrung out with a five per cent. solution of carbolic lotion were introduced into the wound and the dressings reapplied, and not disturbed for forty-eight hours. When the wound was dressed again, it was found not to be aseptic, so that Lister's dressings were left off. A very porous cloth, in texture something like charpie, commonly used for cleaning railway carriages, often called a "sweat rag," was dipped in a 2½ per cent. solution of carbolic acid and applied loosely round the limb. This case, although not antiseptic, progressed fairly well. The leg was moved from the splint in about six weeks, apparently firm, and fixed in plaster-of-Paris; some sinuses remained, occasionally discharging little bits of necrosed bone and a little purulent fluid.

Dr. Walter Stevens has kindly sent the following report of the man's present condition, dated August 2nd, 1881:—"Amount of shortening, seven inches; measurements taken from anterior superior spine to inner malleolus. He is in good health; has a good appetite; good sleep; no pain in knee. Cicatrix healthy, excepting at inner and outer extremities are openings of small size discharging a slight amount of serous pus."

CASE 2.—A. W——, aged fifteen, a schoolboy, no distinct history of injury obtained; his leg had been bad for three years. During the last two years he had been under the care

first of Mr. Thomas, who applied his splint, then, after some weeks, was admitted into the Royal Infirmary, under Mr. Harrison, and was part of the time under Mr. Rushton Parker, who had some thought of doing some operation. When first admitted into the Royal Southern Hospital he had been under the care of no medical man for twelve months. He had worn a Thomas's knee splint for two years continually. He looked pale and thin; his left knee presented a well-marked example of advanced pulpy disease; not much pain; no displacement of bones. A few days after admission he was sent to the Woolton Convalescent Hospital to improve his general health previous to excision of the knee.

On June 8th, 1880, he was readmitted after a fortnight's stay in the country, much improved in appearance and general health; knee about the same. On the 16th, a week after readmission, the knee was excised with Lister's antiseptic precautions. The whole of the synovial membrane had been apparently converted into pulpy material, which in some places had already broken down into small abscesses, and in other parts had degenerated into cheesy tuberculous-looking masses; the bones were not diseased, but the articular cartilages were eroded by granulations. The disease being confined chiefly to the soft parts, it was only necessary to take a thin slice from the condyles of the femur and the head of the tibia; it was then put up in Mr. Howse's splint and dressed with gauze. The temperature for the next day or two was rather over 100° F., but then went down to normal, and remained so till the 25th of June. Early on that morning he complained of headache and pain in the groin, and perspired very freely. On examination the glands of the groin were found to be enlarged and tender, no redness; the wound and parts around looked œdematous; no tension. Temperature 103·4°, pulse 136, respiration 36.—June 26th: This day some erysipelas appeared about the upper part of the thigh and groin; parts about the operation œdematous, but no redness or other appearance of mischief; discharge aseptic, and only serous. The temperature and pulse kept up for ten days till the 5th of July, when it was 101·8° in the morning and 97° in the evening. Pulse 114 in the morning, 86 in the evening; wound looked well all the time and was quite aseptic. From this time he went on well: appetite good, temperature varying from 98° to 99° up to the 14th of July, when it rose to 100·2°, and on the next day was 101·8°. Some grumous discharge was let out from over the inner condyle. Next day the temperature was 98°, occasionally rising to 101° for a day or two. Pulse 90 to 100 till July 31st, then pulse and temperature remained perfectly normal until Aug. 6th. Up to this time the leg had remained without ever having been moved, fixed in the splint with carbolised wax bandages. On this day the temperature was 100°, and it was noticed that there was some discharge from under the bandages. The bandages were removed, and some pressure sores found; these were dressed and pressure on them relieved as much as possible by removal to a fresh splint. Antiseptic dressings continued till August 14th, when it was found the wounds were quite superficial, and they were left off. The bones were not united, but seemed to be in perfect position. It took nearly another six weeks to heal the superficial wounds remaining, but the boy looked very much fatter and had more colour in his face than before the operation. He went to Woolton Convalescent Home for a month, and returned apparently quite well. His leg was straight and firm, but the cicatrices had broken down a little; a few days' rest in bed remedied this, then Mrs. Davies, one of the ward sisters, sent him, at her expense, to Ben Rhydding Hydropathic Establishment, in Yorkshire, for a few weeks before he finally returned home. In answer to inquiry, Dr. Fletcher Little of Ben Rhydding sent the following report of his present condition, dated August 30th, 1881, only little more than twelve months after the operation: "1st. He is here to earn his living as window cleaner, and to get strong in our air and eating good food. 2nd. The cicatrix is firm and healthy; the bones are quite firm; he has gained eleven pounds in weight since his arrival, six months ago; there is a shortening of half an inch; he looks well and is getting quite strong." The boy himself, in a letter written a day earlier, states: "My health has been very good since I came out of the hospital. My leg is quite well and can be used without pain. My leg is a little shorter, but you cannot notice it when I am walking."

CASE 3.—E. D——, aged twenty-two, a married woman, admitted on Sept. 27th, 1880, gave the following history: Ever since she was four years old she had suffered with the right knee; no history of any injury, but came on with pain and swelling. Pain had not been continuous; had sometimes been twelve months without any pain. Had been able to bend the knee within the last sixteen months, and also able to walk. When seven years old was an out-patient at the children's infirmary, where the knee was blistered, which relieved it for the time. When eleven years old she was admitted into the old Southern Hospital, when the knee was poulticed; she was discharged in six weeks, much relieved. Was first admitted into the Royal Southern Hospital nine months ago, complaining of much pain, and of not being able to sleep on account of jumping pain; tibia slightly displaced backwards, leg fixed at an obtuse angle. It was first placed on a Macintyre's splint, but as it had no effect in relieving the pain, and but little in getting the leg straight, a Thomas's knee-splint was substituted; with this the leg was rapidly got into a good position, and it had the effect of much diminishing the pain. As she was three months pregnant she was sent out with Thomas's splint on, and after her confinement was readmitted in very much the same condition as she was before, complaining of a constant gnawing pain, and, if without the splint, of jumping pain at night; knee fairly straight, not much swelling, only on comparing it with the other is much noticeable; patella somewhat fixed, not painful on pressure, except in one spot. General health very good. She had her knee excised, with the usual antiseptic precautions, on October 20th; it was then found that the whole of the articular cartilage was gone, and replaced by granulation tissue; the patella was also denuded, and partially anchylosed to the condyles of the femur. After the operation she still complained of much pain, and the second day after the temperature rose to 102° F., pulse 128; but the next day it had gone down to 100°, and the pulse to 100°; the rise was apparently due to constipation. It kept varying for the next fourteen days from 98° to 100°, twice reaching 101° in the evening. On November 7th, the eighteenth day after the operation, it was rather below 98°, and never rose above normal again while the temperature was taken; her pulse was generally about 100. The wound remained aseptic, and rapidly healed, with the exception of one or two places where there were sinuses leading towards the bone. She suffered rather from carbolic eczema, which, however, was at once relieved by an ointment of salicylic acid and vaseline, and for a day or two she had some enlarged glands in the groin from the irritation of sores caused by the splint. On December 2nd, six weeks after the operation, the gauze dressings were omitted, and the one or two discharging sinuses were dressed with boracic acid lotion, the limb was removed from Howse's splint and placed in a Macintyre; then it was put up in a casing of plaster-of-Paris, leaving a window for the small sinuses; this was taken off, and the limb, being still far from firm, was put in a Thomas's splint, and she was allowed to get about. She was not discharged till February 14th, 1881, nearly sixteen weeks after the operation, and the limb was not even then firmly anchylosed, and the sinuses still remained, although they were not discharging much; but although she had been in a long time she left the hospital looking as well as on admission, and, though still unable to use the limb, suffering no pain. The following report was received from her on Friday, Aug. 12th, 1881. She states the knee is quite straight, getting firmer every day, but does not feel quite firm enough to bear much weight yet. The cicatrix is "quite healed, and closed; there is no discharging sore." It "is better than half an inch shorter" than the sound leg. "I wear a wooden back-splint and a bandage; when I have the back-splint on I can lift or move it anywhere, but without it it feels very weak and powerless. I go about on two crutches, and wear a sling. I have no pain, but when I go without the sling towards night it feels very heavy, and quite in the way. It feels so strong at times that I could walk on it, but I feel afraid to venture. I would like some medical opinion first, for fear it is not firm enough. I enjoy the best of health, and am four months gone in pregnancy." The above report, mostly in the patient's own words, prove that, considering the prolonged duration of the disease, the convalescence has not been unduly prolonged.

Remarks by Mr. RANSFORD.—Mr. Rushton Parker is reported to have said, a few years ago, that excision of the knee was an operation of the past; and Mr. Holmes, that it was an operation seldom or never done in Liverpool. But I think the foregoing cases tend to show it may be done with benefit still; and I am sure if all the cases operated on at the Royal Infirmary, the Northern and Southern Hospitals, were

reported, Mr. Holmes would find Liverpool had its share of cases, although, no doubt, within recent years many cases have recovered with the aid of Thomas's splints, which would have required excision or amputation a few years back. The first case could hardly be called an excision of the knee, as the joint was *non est*; it was an excision of the condyles of the femur, to enable the surgeon to bring forward the tibia into a straight line with the femur, to do away with a deformity which prevented him walking except with the aid of a crutch. The leg is seven inches shorter than the healthy one; for, in the first place, it was a leg atrophied from disease and want of use; and, in the second place, the surgeon had to remove a large amount of the femur to allow the tibia and fibula to be brought forward; so much so, that a friend thought it would be better to amputate; but the result has justified the operation, as he gets about with a light iron shoe attached to the sole of his boot, or even without, much better and more quickly than he could with any artificial leg. The second case I operated on without any preliminary trial of other means. First, because these had already been tried for two years by some (as the names given previously will prove) of the most eminent surgeons of Liverpool, without any permanent result in staying the progress of the disease; in fact, it had steadily advanced, for although he had seen no surgeon for some months before admission into the hospital, yet he had continued to wear Thomas's knee splint, and had kept the joint at perfect rest, according to their directions. Secondly, it seemed to me from the long history and the advanced stage of the disease likely to break down soon, and discharge by numerous sinuses; and if this had happened, which the operation proved could not have been long delayed, in a lad of the patient's strumous constitution, would probably have resulted in amputation; or if this was refused, prolonged suppuration, leading probably to death from hectic, amyloid disease, or tubercle; or, if he survived all these, recovery with a very damaged constitution. A third and very important argument in favour of excision in this case was time. Here was a lad of fifteen, of respectable but poor parents, who had already been ill three years, and to whom, therefore, a quick recovery was a most important item. If he had been left to nature under the most favourable circumstances it would have taken probably three or four years to recover; but with an aseptic excision, after eight months he is able to take a situation and earn a living, with a limb perhaps a little shorter, although in every other respect much better than could be hoped for by natural means, and with much less risk. The natural history of the third case is very well summed up in the remark of Mr. Cooper Forster, to the following effect—viz.: "These cases come into the hospital and improve very much by rest, and are able to get about, till a slight injury or over-exertion sets up fresh action; then they are readmitted, with a like result, but after a time generally end in amputation." The operation in this case tended to show that this case, with time and proper care (neither of which this patient could get), would probably have gone on to a quiet anchylosis in a year or two, but as she could not afford the time and could not get the proper attention, I proposed excision, to which she readily agreed, especially as after wearing Thomas's splint for more than six months she was dissatisfied with the progressmade.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Fracture of Cervical Spine.—Hæmato-chyluria.—Recurrent Fibroid Tumour.—Aneurisms of Aorta.—Membranous Band in Left Auricle.—Lupus Lymphaticus.—Cyst containing Oil.

THE Pathological Society of London resumed its meetings on Tuesday, October 18th, when the President, Dr. Wilks, F.R.S., occupied the chair, and welcomed the members back to their work, which he hoped would be as successful as in the past. There was a very large attendance, attracted by Dr. Stephen Mackenzie's very interesting demonstration of the Filaria Hominis in the blood of a patient suffering from Hæmato-chyluria. This case was the chief topic of discussion, and elicited valuable remarks from Drs. T. S. Cobbold and Vandyke Carter.

Dr. CARRINGTON showed a specimen of Fracture of the Cervical Spine. A man of drunken habits fell into the hold of a ship on to his head; he rose to his feet by his own efforts, and had for some time bleeding from the mouth, followed by dysphagia and swelling of the neck. He attended two or three times as an out-door patient at Guy's Hospital, and was ultimately admitted under Dr. Wilks' care. The symptoms at that time were obstruction to swallowing located on the left side, pain in the neck and between the shoulders; no paralysis. Laryngoscopic examination showed inflammation of the epiglottis and a slough on the pharynx, so that the diagnosis of diphtheria was made by some. There was constant pyrexia, on one occasion the temperature rising to 103·5°, and the man died with delirium and tremor like delirium tremens. At the autopsy there was found a rough interval in the cervical spines; the body of the fifth cervical vertebra was broken across, no displacement or pressure on cord; posterior common ligament not torn; on the left side the lamina was broken off and was lying bathed in pus. Spinal cord and membranes were fairly normal. Membranes at base of brain showed signs of inflammation. There was a wound in the back of the pharynx half an inch long leading into a præ-vertebral abscess, the wound having been, no doubt, inflicted by the sharp edge of the fractured vertebra. The dysphagia may have been due to extension of the inflammation to the medulla and pons.

Dr. STEPHEN MACKENZIE showed a living specimen, a patient suffering from filarious hæmato-chyluria. Bombardier F. H. C——, aged twenty-six, a native of Madras, born of European parents, had lived in India all his life until he came to England with his battery in February of the present year. He had enjoyed perfectly good health all the time he lived in India. One month after his arrival in England he noticed his urine was increased in quantity, and that it appeared slimy, and a few days later it assumed a milky appearance. Early in May he had a sharp attack of pain in the loins and testicle, and passed almost pure blood per urethram. The hæmaturia lasted a few days, and the urine, much increased in quantity, again became milky, and has remained so since. The patient came under Dr. Stephen Mackenzie's care in August. Whilst under his observation, the urine has presented the usual characters observed in hæmato-chyluria. The patient passed daily from 120 to 200 ounces of urine, looking exactly like milk mixed with varying quantities of blood. It coagulates almost immediately after being passed into a soft tremulous jelly, the greater part of which breaks down in about half an hour. Agitated with ether the milkiness almost entirely disappears. The urine has a specific gravity of from 1008 to 1016, is neutral or faintly alkaline, coagulates with heat and nitric acid, and is free from sugar. Microscopical examination shows the presence of very minute granules, on which the milky appearance depends, blood-corpuscles, and filariæ. The latter are especially connected with blood coagula in the urine, and many are alive. No casts of the urinary tubules have been detected. Certain differences between the day and night urine have been observed, but not constantly. That passed by day contains more blood and fibrin; that passed by night is more milky. The day urine probably contains the greater number of filariæ. Examination of the blood shows the presence of living filariæ sanguinis hominis, first discovered by Lewis in India in 1872. Under ordinary circumstances the filariæ are absent from the blood during the daytime, but at about 9 P.M. they make their appearance, and at midnight they are most numerous. At 3 A.M. the numbers show a sensible diminution; at 6 A.M. very few are present, and at 9 A.M. they are practically absent, and the blood remains free from them until again at 9 P.M. These observations confirm, in a remarkable manner, the statements of Dr. Patrick Manson, in China, who was the first to describe the periodicity of filarial migration. The present observations have extended over two months, during which time the blood has been examined every three hours. Considerable alterations in the patient's meal-times did not markedly influence the periodicity, but on completely inverting the patient's hours of being up and in bed a complete inversion of the periodicity of filarial migration took place, the maximum number of filariæ then appearing in the daytime, and but few appearing in the blood at night. On a return to the ordinary hours of living the filarial migration followed

the change, and the filariæ disappeared from the blood in the daytime and appeared, as before, in numbers at night. A diagram was shown to the meeting, in which the periodicity of the filarial migration was clearly demonstrated. The importance of filarial migration is that the mosquito has been shown by Manson in China, and confirmed by Lewis in India, and Bancroft in Australia, to be the "intermediate host" of the parasite. (Mosquitos gorged with filarial blood, from China and Australia, were shown under microscopes at the meeting.) It is one of the most remarkable phenomena in pathology that the filariæ should thus swarm in the blood at night when the mosquito feeds, almost disappearing in the daytime. As regards the filariæ, they measure about $\frac{1}{175}$ to $\frac{1}{75}$ of an inch in length, and from $\frac{1}{3500}$ to $\frac{1}{3875}$ of an inch in breadth. The head is rounded, but not possessing any orifice; at the lower end the body becomes attenuated into a fine pointed tail. Another envelope is to be seen, within which the worm moves itself, and from which it sometimes nearly escapes when dying. Within the inner membrane granular contents only are visible. When freshly drawn from the blood, the worm is in a very active condition, twisting and wriggling about like an eel, lashing the blood-corpuscles with its tail. Under favourable circumstances, the filariæ, when removed from the body, remain alive for from twelve hours to three days, but they readily succumb to reagents. Micro-photographs by Dr. Bellfield, showing the filariæ with various magnifying powers, and some showing exceedingly well the outer sheath, were exhibited.—Dr. COBBOLD stated that the filarial discoveries had not received their due attention in Europe, and were not even alluded to in the recent meeting of the Congress; but that we really are in possession of a large mass of most important facts and valuable conclusions drawn therefrom. There have been five epochs of discovery. The first was that of urinary filariæ in 1866. Then in 1872 Lewis found these parasites in chylurious patients, and others found them in various tissues of the body. The next epoch was Bancroft's discovery, in Australia, of the sexually mature worm, three and a half inches long, in a lymphatic abscess in the arm; six months after it was found by Lewis in India, and Manson in China, and in Brazil. The fourth epoch was Manson's discovery of the intermediary host, the mosquito. The fifth and last epoch is the discovery of filarial periodicity by Manson. It is most extraordinary that the filariæ should be in the blood just when the female mosquito visits its human victim. If a drop of blood be taken from a man, and from a mosquito which has fed on the man, there are fewer found in the man than in the mosquito, because the proboscis of the mosquito is forced into the axis of a capillary, and catches the filariæ wholesale, and extricates them in masses from the human blood. These discoveries are even more important than those of trichinosis. It had been said that lymph scrotum, chyluria, &c., cannot be produced by these filariæ; but the evidence on this point is now so strong that it has been proposed to call this group of diseases "Wucherer's helminthiasis." Dr. Mackenzie had brought forward quite a new fact in showing that the habits of the filaria are alterable by change in the habits of their bearer.—Dr. WILKS asked if Dr. Cobbold had any theory to account for the periodicity.—Dr. COBBOLD preferred not to enter upon that discussion just then.—Dr. GEORGE HARLEY thought that the germ theory of disease was a most important fact. Filariæ are worms that play a vast part in the production of disease. In animals they are found in vast numbers, and in most various sizes. A few months ago, in an epidemic of jaundice in horses, Dr. Evans, of the Punjaub, found filariæ in all the horses affected by the disease, and none in the healthy horses. Almost all these germ diseases are periodic, as scarlet fever, ague, and phthisis. Dr. Atkinson has found that the germs giving rise to fermentation of rice give rise to periodic heat.—Dr. VANDYKE CARTER, twenty years ago, undertook the examination of chyluria in Bombay, and found no filariæ, no doubt because he had only examined the urine passed in the day; had he conducted his search at night he would have found them. In reference to the periodicity—a most remarkable fact—it must be remembered that it need not occur, and must be looked upon as an accident. He had several times found several filariæ during the day. His theory to account for the periodicity was, that at a certain time the mature female worm discharged its countless young, and hence he had suggested that food and temperature might influence it; the food causing an increase in the lymph stream, which might then wash on the swarms of filariæ. In cases of chyluria, the symptoms frequently disappear at times for longer or shorter periods. That disease had been shown to be connected with lymphatic obstruction and dilatation in the urinary tract, the obstruction probably being due to the parent worm, which periodically discharged its swarms of young into the urine. Chylous urine is only produced when the parent worm is lodged in some part of the urinary tract. He had found the filaria in the blood during, but not between, the febrile paroxysms of elephantoid fever. The filaria may exist in the blood without producing any symptoms at all.—Mr. WALTER PYE stated that the filariæ shown were identical with those which he saw in Amoy with Dr. Manson. There they always found the coagulated chylous urine after some hours redissolved into a turbid fluid. The Chinese at any rate can have perfect health with enormous numbers of filariæ in the blood at some time of the day.—Dr. S. MACKENZIE, in reply, mentioned the case of a man with elephantiasis in whose blood Dr. Lewis had found filariæ in India. He could find none when he came to England, even at night. In another case of elephantiasis contracted in America he could not find filariæ.

Mr. GAY showed a specimen of Recurrent Fibroid Tumour of the Mamma. The woman was first seen by him in 1865, aged sixteen. The tumour then removed is described in vol. xvi. of the Pathological Society's Transactions, and Dr. Hodgkin pronounced it to be cystic, with spindle cells. It sprang from the fibrous tissue round the gland. Since that time he had removed the growth seven times, and the specimen shown was the seventh recurrence. They have all preserved the same histological characters—a small spindle-celled sarcoma. The tumours have changed in appearance and their course, but histologically they have remained the same. The recoveries have been complete and perfect. The scars are free from all disease. Latterly there has been a great tendency to ulcerate. Twenty years ago the patient was very delicate and thin, but now she is strong, well nourished, and even fat, and Mr. Gay thought this was often seen in patients with recurrent fibroid tumours.

Dr. J. FOWLER showed a specimen of Aneurism of the Aorta. A man, aged sixty-six, who had previously enjoyed uninterrupted good health, was suddenly attacked with a sharp pain in the chest and hæmoptysis, the bleeding recurred six times, and just after his admission to the Middlesex Hospital, whilst sitting up in bed, profuse and fatal hæmoptysis occurred. Post mortem it was found that the apex of the left lung was adherent to the arch of the aorta. A sacculated aneurism, two inches in diameter, was found springing from the aorta, just beyond the left subclavian artery, the sac opening into the bronchi of the left lung, the blood having forced itself between the sac and the contained laminated clot. A dissecting aneurism was also found, four inches in length, communicating above with the other aneurism by a small aperture through the laminated clot, gradually tapering below; along this sac the lower lobe of the left lung was firmly adherent to the aorta. An inch and a half below the sacculated aneurism was the commencement of a partial rupture of the coats of the aorta, four inches and a half long; above only the inner coat was torn, but below the rent extended also partly through the middle coat; the floor was covered with a thin layer of laminated clot; above the spot a small pouch existed, separated from the lower end of the dissecting aneurism by a layer of fibrine one sixteenth of an inch thick. At the lower margin of this rent a third aneurism, projecting from the anterior wall and involving all the coats of the artery, was seen, oval in shape, about three inches in its long axis. The rest of the aorta was atheromatous; the left ventricle of the heart was hypertrophied, and the kidneys were granular. Cases of aortic aneurism with the sac in the lung are not common, and this site of the rupture was only noticed in eight out of the eighty-five cases collected by Dr. Peacock. With such extensive disease it was remarkable that the rupture of the sac should have been the first thing to cause any symptoms.

Dr. FOWLER also showed a Heart with a Membranous Band in the left auricle, found in a man recently under Dr. Douglas Powell's care, who died of cancer of the liver. There were no symptoms or signs of heart mischief during life. The heart weighed thirteen ounces and three-quarters; all the valves were normal and competent. In the left auricle was a membranous band, in texture resembling the pulmonary cusps, three-quarters to one inch wide. Its surfaces were smooth, and fine bands of muscle were seen in it continuous with those of the auricle. It was attached above and to the inner side of the annulus ovalis, and was con-

tinuous with the membrane covering the foramen ovale; it was also attached to the inner wall of the auricle by some thin bands and fine filaments. With the heart in position, the edges of the membrane were nearly vertical. In crossing to the outer wall of the auricle it was twisted, and was fixed close to the opening of auricular appendix. There was a small patent foramen ovale. Dr. Fowler considered it was caused by an overgrowth of the valve of the foramen ovale, which had been pushed over to the opposite wall by the blood, and then became adherent. It had not interfered with the action of the heart. He had not been able to find any similar case recorded.

Mr. BRYANT showed a Cyst containing Oil removed from the Parotid Region. A girl aged nineteen had had a very small growth at birth, which increased to the size of a flat walnut; it was translucent. During removal the sac ruptured, and discharged half an ounce of clear oil. The cyst was thin and smooth on the inner side. He found no record of such a case in the Society's Transactions. M. Guérin had lately described a case of congenital oily cyst near the ear in a woman aged thirty. Dr. Wilks had also recorded a case of fatty cyst of the pelvis. These growths, he thought, must be regarded as dermoid in origin, and he mentioned that his patient, although well in every other respect, had never menstruated, as if possibly there might be some "dermoid" condition of the ovaries.—Mr. DORAN asked if the endothelium of the sac was squamous or columnar?—Mr. BRYANT stated that the microscopic examination of the sac had not yet been made.—The PRESIDENT referred to the case mentioned by Mr. Bryant, which occurred in a man who was tapped, and a large quantity of oily fluid was withdrawn from the pelvis. Some years later he came under Mr. Curling's care, when a stone was removed from the bladder which had for its nucleus a small ball of hair, strongly suggestive of the dermoid nature of the original disease.—Dr. COUPLAND suggested that such cysts as that shown by Mr. Bryant were connected in some way with imperfect closure of the outer extremity of one of the branchial clefts.—Mr. DAVIES-COLLEY once had under his care a woman aged twenty-six, who had a small cyst just above the right zygoma. On opening it about half a drachm of olive-oil-like fluid was collected, which in a few minutes coagulated into a firm yellow fat.

Dr. CARRINGTON showed a card specimen of Fracture of Cervical Spine, with wound of œsophagus.

Mr. J. HUTCHINSON showed a living example of a rare form of skin disease, named by him Lupus Lymphaticus.

The Society then adjourned.

CLINICAL SOCIETY OF LONDON.

Traumatic Rupture of an Ovarian Cyst.—Large Odontome removed from the Lower Jaw.—Charcot's Joint Disease.

THE first meeting of this Society after the vacation took place on the 14th inst., J. Lister, Esq., President, in the chair. In taking the chair he announced the decision of the Council to nominate the following distinguished men as honorary members, in commemoration of the International Medical Congress of 1881:—Sir James Paget, second President of the Society and President of the Congress; Dr. H. J. Bigelow of Boston; Dr. Billings of Washington; Professor Esmarch of Kiel; Professor Volkmann of Halle; Professor Verneuil of Paris; M. Ollier of Lyons; M. Pasteur of Paris; Drs. Pantaleoni and Mazzoni of Rome.

Dr. WILTSHIRE read notes of a case of Traumatic Rupture of an Ovarian Cyst. A lady aged twenty-eight, just convalescent from typhoid fever, fell while in a hansom cab, struck her abdomen, and burst an ovarian cyst which she had had about three years. Severe shock and collapse ensued, but under opium and restoratives she slowly recovered, and two years after the accident remained quite well and free of her tumour, with the exception of a small mass supposed to be the remains of the collapsed cyst and pedicle. Though an expectant plan of treatment was elected, in the belief that no hæmorrhage was going on, yet the propriety of immediate operative interference was discussed, chiefly in relation to the question of rapid death from internal hæmorrhage, and its arrestment by means of abdominal section, accompanied, of course, by removal of the ovary. Operation in connexion with ruptured dermoid, purulent infective, or strangulated (twisted) cysts, and peritonitis was also referred to; and allusion was made to the treatment of dangerous intra-peritoneal hæmorrhage from ruptured ectopic gestations, varices of the broad ligament, ruptured uterus, &c. The prognosis in rupture of infective ovarian growths was adverted to, and the views of pathologists and surgeons thereon respectfully sought.—The PRESIDENT remarked that such a case must be one of great anxiety, requiring prompt decision in dealing with it. One important point would be whether the cyst were unilocular or multilocular; if the latter, theoretically the better treatment should be to rid the patient of the fluid and diseased growth; if a single cyst, the fluid might be allowed to become absorbed. Still it was a matter only to be decided by experience. The dwindling of the solid mass in this case was singular.—Dr. WILTSHIRE, in reply, said that Dr. Oldham, who saw the case on the day of the accident, thought it was a multilocular cyst, together with some solid material. Drs. Kidd and Swan of Dublin were of the same opinion. The main question in such cases is as to the probable prognosis, in view of recurrence from peritoneal infection, as in two cases recorded by Dr. Bright in his essay on Abdominal Tumours. The surgical aspect of such cases is also of great importance.

Mr. CHRISTOPHER HEATH read notes of a case of Large Odontome removed from the Lower Jaw. This was one of the rare tumours described by Broca as "odontomes odontoplastiques," and consisted of a mass of dentine studded with nodules of enamel. The mass weighed 315 grs., and measured 1½ in. by 1¼ in. The patient was a young lady of eighteen, who had never been able to close the teeth properly, but otherwise was supposed to have gone through the first and second dentitions naturally. Last Christmas she had some pain and uneasiness about the right angle of the lower jaw; and in April her father, a dental surgeon, extracted the second bicuspid tooth, there being no molars then present. A dentist who was frequently consulted thought he detected an encysted tooth, and tried to extract it with the elevator. The result was an acute attack of periostitis. Profuse suppuration ensued, and on firm pressure near the angle pus could be forced up from the interior of the bone. Under treatment the inflammation subsided, and the patient went to the seaside, and on her return there was apparently some exposed bone, with greatly hypertrophied mucous membrane on each side. A month later, after imprudent bathing, sudden increase of pain and swelling took place, and she consulted Mr. Heath, who found great enlargement of the bone, with a fungus-like growth in the mouth, and apparently bare bone, the appearances closely resembling those ordinarily found in a case of sarcoma of the jaw. An operation involving removal of a portion of the jaw was declined, and the swelling slowly diminished again. In September Mr. Heath undertook an operation for removal of the supposed sequestrum of bone, and after considerable trouble succeeded in elevating the mass described from its bed, since which the jaw has slowly contracted to its proper stage.—In reply to a member, Mr. HEATH said that he was not aware of any history of a direct injury at an early age.—The PRESIDENT said the case was one of great interest, practically in the fact of its close resemblance to a tumour of the lower jaw, and its removal by mere extraction; and pathologically in its structure—composed as it was of dental tissues. Such cases are rare, and it was important, as Mr. Heath had said, to be on one's guard against removing a portion of the jaw by mistake.

Mr. KEETLEY showed a patient suffering from Charcot's Joint Disease. The case was that of a shopkeeper, Mr. J. P——, aged thirty-four, married ten years, having three healthy children. Up to October, 1880, no other symptoms than the following had been noticed:—(1) Slight "weakness in the legs," of twelve years' duration, and attributed by the patient to the lameness occasionally produced by a "corn" beneath the right great toe; (2) pains in the muscles, described as "rheumatic"; (3) attacks of diarrhœa, occurring fortnightly for long periods at a time. But in October, 1880, the "corn" ulcerated, and the corresponding great toe became greatly swollen. About a week afterwards the hip, groin, and thigh of the same side (the right) swelled enormously, but the surface was pale and comparatively free from pain—i.e., such pain as did exist was not synchronous with the occurrence of the enormous swelling. A deep fluctuating point being opened towards the lower part of the front of the thigh, several ounces of synovia or synovial-like fluid escaped. In two months the patient was able

to stand again and move the joint freely, but there was left one inch and a half shortening, a tendency to eversion, and a peculiar "crunching" or crepitus on manipulating the hip in a certain manner. The joint was also somewhat loose. Apparently the head of the femur had disappeared. From this time for nine months the limb steadily increased in usefulness, the powers of spontaneously rotating it both inwards and outwards seemed to also return. Then the left hip was attacked exactly like the right, but not so acutely. This attack came on whilst the patient was being severely purged by two pills and two black draughts prescribed by a chemist on the theory that the patient looked "bilious." While the swelling of the left hip was subsiding after the manner of that on the right side a year before, severe pains attacked the front and inner side of the left thigh and the left knee also, but passed away after some hours. At present the patient has only occasionally slight pains in the left thigh, but great numbness on the front aspect about the knee. He can already get about again on crutches, and even stand without them. There is now evidence of the left hip having undergone anatomical changes like those of the right. The right great toe joints are also deformed since the swelling thereof twelve months ago. The "corn" is now represented by a thin red scab. There are various symptoms of tabes dorsalis besides those above-mentioned. There are loss of patellar tendon-reflex, of iris-reflex, of the power of standing with the heels together and the eyes shut, partial loss of sensation in the outer sides of both feet, perverted sensation in the right foot, slight deafness of the left ear, and (?) an ataxic gait disguised by the joint affections. And, though there are no gastric crises, there are what might be termed "intestinal crises"—viz., the above-mentioned periodical attacks of diarrhœa. In the case of each hip, the subsidence of the general swelling left a marked enlargement of the inguinal glands, which persisted some time. The internal treatment has been iodide of potassium with salicylate of soda, five grains each three times a day. Is it justifiable to try nerve-stretching in this case? There are the following grounds for entertaining such an idea. In most of the cases, now not few in number, in which nerve-stretching has been done for the lightning pains, general as well as local benefit has accrued not only by way of lessening the pain, but also of diminishing or even removing the incoördination. And the same general improvement as regards the whole neurosis has been observed in leprosy, when the pains of that disease have been treated by nerve-stretching. Done antiseptically it is by no means a very serious proceeding. Moreover, to do nothing in such a case as this does not secure for the patient a good prognosis. If the speaker had any evidence to show that nerve-stretching had checked the visible changes in the skin in leprosy he would be still more inclined to try it. Could any of his hearers speak to that point?—Dr. DUCKWORTH said these cases seem to be more common in France; so rare were they in this country that at the time of the meeting of the Congress Sir James Paget wrote to Professor Charcot about this affection, having been unable to come across any specimens of it in the chief London museums. The ulceration on the foot resembled that described by Professor Ball of Paris at the Congress. Professor Ball related fifteen cases, which were regarded by him as neuro-trophic. The question of nerve-stretching was discussed at the Congress, some advocating it, others, as Professor Erb of Leipsic, being opposed to it; at any rate, the majority of speakers were in favour of nerve-stretching where there was much pain.—Dr. BUZZARD said that the condition of a suppurating corn occurred in a case brought before the Society ten years ago by Dr. Greenhow, and he (Dr. Buzzard) had seen it since in several cases. It was, no doubt, a trophic change. The present patient has suffered from paroxysmal attacks of diarrhœa every fortnight for the past ten years, and from heartburn, but not from gastric crises. He had related a similar case at the Pathological Society, and had found in nine cases of tabetic arthropathy six with "crises gastriques," and one with paroxysmal diarrhœa. It would be interesting to know whether this intestinal affection were a primary affection of the intestinal canal or were secondary to gastric disorder from implication of the vagus-nucleus in the sclerosis. He had suggested such an explanation to account for the gastric crises, and their frequent association with articular changes might be due to that nucleus being in close proximity to the nucleus governing the nutrition of joints—a hypothesis which would also explain the conjunction of articular and cardiac affection in rheumatism. Atrophy of the cells in the anterior grey cornua in tabetic arthropathy had not been borne out by post-mortem examinations; nor did the electro-muscular reactions coincide with the view of the implication of those cells. Indeed he had seen a case where there was great muscular development about a shoulder-joint affected with tabetic arthropathy.—Dr. ALTHAUS said that the œdema observed in Mr. Keetley's case was rare, the swelling as a rule being firm and hard, not pitting on pressure. The hypothesis, then, of connexion between the gastric crises and joint affection was insufficient, gastric crises being far more common than the arthropathy, which is excessively rare. The medullary centre assumed to exist by Dr. Buzzard was an ingenious hypothesis, but one incapable of proof. Charcot's view as to the involvement of the anterior cornual cells had not been verified. Professor Volkmann of Halle started the view that these affections were really due to injury from the jerking and spasmodic (involuntary) movements; but Dr. Althaus did not think this could be entertained, for, in some cases, the joint affection is an early and not a late symptom. Nerve-stretching, at present, should be limited to cases where there was nerve pain; it does sometimes no harm.—Mr. PAGE said there had been several cases in England since M. Charcot and Dr. Buzzard had drawn attention to the arthropathy, and Mr. Macnamara showed two cases at the Congress. A similar case was lately seen at St. Mary's Hospital; the patient suddenly, while walking, found one limb shorter than the other without having any pain. Mr. Page also had recently seen a case in private. He showed at the Congress a patient in whom the small joints of the foot were affected, the tarsal joints enlarged, and bones freely movable on one another without pain. There was a doubtful history of syphilis, and iodide of potassium was given. The patient also had suppurating corns, which were not painful. It was then found he had all the recognised symptoms of tabes. After a time the swelling of the foot subsided and the bones became anchylosed; and whilst under observation the other foot became affected. The foot was greatly swollen on admission, the swelling having occurred suddenly and painlessly. In course of time the swelling subsided. The painlessness was remarkable. He had been subject to gastric crises, and lately intestinal crises and profuse hæmaturia.—The PRESIDENT observed that the affection was obscure, but thought it remarkable that no specimen could be found in the College of Surgeons Museum, for it was not so extremely rare in this country. There was lately in King's College Hospital, under one of his colleagues, a case where the knee-joint was affected.—Mr. KEETLEY, in reply, thought Dr. Buzzard's theory a reasonable one, but if true, it was remarkable that the gastric crises should have lasted so long. Still this was paralleled by the very early occurrence of ocular symptoms in some cases. It does not appear that any particular joints are affected. He had found only one case where both hip-joints were affected out of twenty-three, yet symmetry in the distribution of the joint disease is not unusual. The marked characteristics of the disease were very striking, and he believed Charcot right in saying that the disease is tolerably common. The great and rapid swelling without pain, followed in two months by shortening, eversion, and restoration of power, was quite singular. He thought the apparent rarity due to the fact that such cases came chiefly under the notice of physicians and not surgeons.

The Society then adjourned.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

President's Address.—Relation between Apparent Movements of Objects and Rotation of the Eyes.—Uniocular Diplopia. — Suppurating Ophthalmitis from Embolism. — Tuberculosis of Iris.—Perineuritis Optica.—Double Optic Neuritis with Cerebellar Tubercle.

AT the opening meeting for the session of this Society, on the 13th inst., the President, Mr. BOWMAN, F.R.S., made a few remarks. He alluded especially to the assembly of the International Medical Congress in London, "when more than 3000 medical men met, from almost every part of the civilised world, to communicate and to receive knowledge, discuss questions most nearly interesting them, and to become personally known to each other." It had proved emi-

nently successful in almost every Section. "In that of ophthalmology we were honoured by the presence of many men whose names, and character, and scientific labours were more or less familiar to us, and the several important subjects brought before us and debated will be found, I think, to have been advanced and elucidated to the great advantage of all the cultivators of our science, and of those to whom we minister." After enumerating the principal subjects debated at the Section, Mr. Bowman referred to the action taken therein on the subject of colour-blindness, which had been investigated last session by the Society. "Under the presidency of Professor Donders a representative committee prepared articles as to 'Tests of sight suitable to be enforced in the case of signalling and look-out men, and other persons, by land or sea, with suggestions as to international arrangements for a uniform system of maritime, coast, and harbour signalling, with a view to the safety of life and property,' followed by explanatory remarks under the several articles. These having been adopted by the Congress have been forwarded to the Foreign Office with a request that they may be favourably considered, and communicated to the various governments. A copy has also been sent to the First Lord of the Admiralty, and to the President of the Board of Trade. The other general act of the Congress was one of hardly less interest to our branch of the profession than to others, and indeed to the whole human family. I trust it may have its due weight in modifying the public sentiment, and in enlightening the minds of our political men on a subject, with the basis of which they have been but imperfectly acquainted; the result of this want of insight having been that they have consented too hastily to legislation, which has already proved lamentably obstructive to our countrymen, laudably and nobly desirous of advancing medical knowledge in its most fundamental principles." Mr. Bowman then read the resolution of the Congress upon experiments on living animals, and concluded his remarks by announcing the speedy appearance of the Transactions of the Congress, under the energetic editorship of the Honorary Secretary General, Sir William Mac Cormac. He also laid on the table a copy of the first annual volume of the Transactions of the Ophthalmological Society.

At the invitation of the President Dr. Hughlings Jackson read two notes which had been received from Professor Donders, of Utrecht, with reference to the subject of the Relation between the Apparent Movement of Objects and the Rotation of the Eyes. Dr. Jackson had published in *Brain* (April, 1879) a case of auditory vertigo in which each eye was partially and very slightly rotated to the right in frequent jerks; the patient said that objects seemed to move to the right, indicating the direction and the jerking character of the movement by jerking his hand from left to right. It had been suggested that the apparent movement of objects occurred not during the jerk to the right, but during the more gradual return of the eyeballs to the state of rest, and it had been contended that it was theoretically impossible that the apparent movement could occur in the same sense as the eyeball movements. Dr. Jackson, however, believed that the apparent movements coincided in time with the jerks, and at his suggestion Mr. Bowman submitted the question to Professor Donders. In the course of his reply he observed that in every rotation of the globe the images glided on the retina in the same sense as the rotation, while the objects passed before the line of sight in the opposite sense, though there was no apparent movement, because the displacement corresponded exactly to the voluntary motor impulsion. It followed that where rotation of the globe occurred without voluntary impulsion, as in passive movements and spasms, the apparent movement would be in the opposite sense to the rotation; in the converse condition—i.e., when, as in paresis of the muscles of the globe, the voluntary impulsion was not accompanied by the corresponding degree of rotation, the apparent movement was in the sense of the impulsion, that is, in the sense of the imperfect rotation. The vertigo, in the case under discussion, was analogous to that produced by turning rapidly round a few times while in the erect posture. After having turned round rapidly to the left, objects seemed to continue their movement to the right, and it would be found that the eyes tended to deviate slowly to the left and then at short intervals to return by a rapid jerk to the right. No movement of objects was noticed during the jerks, but there was a corresponding momentary indistinctness. These sudden jerks were probably too small and too sudden to be taken note of by the brain, but, if remarked, the apparent movement should be, Professor Donders considered, in the opposite sense to the jerks. The experiment, however, did not precisely correspond with the phenomena as described by Dr. Hughlings Jackson's patient, inasmuch as it exemplified movements of the eyes by jerks to the right, induced in a secondary way by an apparent movement of the objects to the right, but not by jerks. After further illustrating the subject by a reference to an experiment with secondary images, Professor Donders concluded his note in the following words: "The propensity of the eyes to move (deviate) to the left in apparent movement of the objects to the right, under certain circumstances, is well demonstrated by these experiments, but it is difficult to account for it in a simple and satisfactory way."—Mr. BRUDENELL CARTER thought the apparent paradox admitted of a simple explanation. The eyes after jerks returned slowly to the normal position; and he asked whether there was anything more in it than persistence of a retinal impression. When the eyes came back to the original position they carry the impression with them.

Mr. JAMES ADAMS read a paper on the Clinical Significance of Uniocular Diplopia. He mentioned a case in which, after alleged injury to the head, the patient (a young hysterical woman) complained of uniocular diplopia, both eyes being in all respects normal. Mr. Adams asked the opinion of members as to the value of this symptom, stating that hitherto he had believed that this diplopia only existed in the imagination of the patient, in the absence of any satisfactory explanation as to how a single retinal image could give rise to a double mental phenomenon.

Dr. OHD read notes of two cases of Uniocular Diplopia. Case 1. A schoolboy, aged thirteen, was admitted into St. Thomas's Hospital on Sept. 3rd, 1879. The lad had an attack of acute rheumatism four years before; and eight days before admission he had an epileptic fit lasting a quarter of an hour. The fit affected the left side of the face and the left arm; no paralysis followed, but he remained drowsy, and for four days had constant vomiting. He complained of severe headache. There was slight drooping of the left angle of the mouth, and some convergent strabismus, both external recti acting imperfectly. There was a loud cardiac systolic murmur. The strabismus increased, the evidence of paralysis of the sixth nerve being more marked in the left side, and two days after admission he was noticed to have diplopia. There was double optic neuritis, more in right than left eye. On Sept. 13th he was found to have diplopia in the left eye; the two images were vertical and parallel, but his general cerebral symptoms had improved. On the 15th, Mr. Nettleship noted that he had generally diplopia with each eye alone, the images separating more as the object moved over towards the temporal side of each field, and as it was removed further from the eye. But he did not always have monocular diplopia, and still had binocular diplopia. At the time Mr. Nettleship did not think his statements of uniocular diplopia reliable; he did not believe he was malingering, but considered that his replies, when one eye was tested, might have been influenced by his experience of the binocular diplopia. Subsequently, the left rectus nearly regained its power, but the diplopia did not immediately pass away. In Nov. 1880, he was admitted under Mr. Mac Cormac, with disease of the cervical vertebræ, and died suddenly four days later. Case 2.—A Frenchman, aged twenty-eight, was admitted on Feb. 16th, 1881, with a history of having been drugged, and fallen downstairs. He had hæmatemesis and hæmaturia, attributed to visceral injuries in his fall, and the day after admission complained of numbness in the left side of the body, and of some loss of power in the left arm. On the 19th he had a series of epileptic fits. He was then found to have almost complete left hemi-anæsthesia and complete motor paralysis of the left arm, partial of the leg. The left facial muscles were not paralysed, but the movements of the external recti, especially the left one, were defective. (Some years before he had been paralysed on the left side after a fall from a ladder, and recovered in a month.) There was also loss of taste on the left side of the tongue, defective smell, and impaired hearing. Ophthalmoscopic examination showed nothing unnatural, but he complained of seeing double with the left eye. Repeated and careful examination showed that in addition to ordinary homonymous binocular diplopia, he saw double with each eye singly. The double images of each single eye were not separated widely. The sight of the left eye became steadily worse, till on April 12th it was reduced to perception of light and shade, and then ensued progressive amblyopia of the right eye, with a high degree of concentric contraction

of the field of vision and some colour-blindness, as in hysterical amblyopia. Before long vision began to improve in this eye. The left-sided paralysis improved, the anæsthesia persisted, when he was seized with severe pain in the right side of the head, followed by a convulsion, and he became anæsthetic and partially paralysed on the right side. He also had a peculiar spasm of the tongue, with difficulty in swallowing, and at one time seemed dying in a comatose condition, and had curious delusions. Some tape-worm was passed on May 9th, and more followed the administration of male fern. On the 16th he could hear well with the left ear, and could raise the left hand to the head, but the hemi-anæsthesia remained, and also the left amblyopia. The right arm was nearly well. When discharged, on June 5th, he had not regained more sensation. Vision did not return in the left eye, nor was it perfect in the right.

The notes of another case of Uniocular Diplopia, communicated by Dr. ABERCROMBIE, were read by the honorary secretary, Mr. Nettleship. The case was one of abscess of the brain and meningitis in a child eleven years of age, under the care of Dr. Cheadle at Great Ormond-street Hospital. She had suffered from headache for two months before admission, at first with occasional vomiting; had had squint for about three months, and had been losing power for two months. There was slight paralysis of the right internal rectus; no ptosis. She saw double with both eyes, and also when the right eye alone was used. There was good colour perception. Slight optic neuritis; no facial paralysis; tongue protruded straight; speech thick; no obvious limb paralysis, but unsteadiness of gait. She was examined repeatedly with regard to the diplopia, but the result was always the same; whenever the left eye was closed there was double vision; when the right was closed her sight was natural. She died a week after admission, coma following on a slight convulsion in the right arm. There was found basal meningitis, and a large abscess cavity in the right temporo-sphenoidal and occipital lobe, the pus having found its way into the lateral ventricle. Dr. Abercrombie stated that there was no doubt as to the reality of the diplopia of the right eye, and inquired whether the destruction by the abscess of the fibres described by Gratiolet as the cerebral expansions of the optic nerve were related to this. —Mr. NETTLESHIP said the case read by Dr. Ord was the second he had seen, the first had been sent him by Dr. Gowers, an epileptic in whom uniocular diplopia was present in certain positions; it was confined to one part of the field, at any rate in the right eye—viz., when the object was in the lower and left part of the field. In Dr. Ord's first case Mr. Nettleship thought at first it was because he had seen double with both eyes, and still retained the impression of diplopia, but later he thought the uniocular diplopia to be real; and in the other case it was undoubted. A few cases of uniocular diplopia had been reported by Galezowski and Duchenne, all being cases of cerebral tumour. Mr. Nettleship hoped that more cases would be forthcoming now that attention was directed to the condition.—The PRESIDENT suggested that such a case might be visited by two or three members of the Society. In such cases much credence has to be attached to patients' statements. He himself could not recall any case to which he could attach any importance, except those arising from physical defects in the structure of the eye, and he had doubts as to these cases having been actually cases of complete separation of two images by a single eye. He asked whether the images vary their position with movements of head, and whether the distance of the object from the eye was accompanied by distance between the images? How was the distinction made between true and false images?—Mr. CARTER thought that two prisms on ground glass would be useful in testing the value to be placed on the patients' statements. He had seen cases of monocular diplopia where there were very slight lenticular changes, and suggested that complete ophthalmoscopic examination might reveal slight defects. — Dr. KNAGGS thought it quite possible for certain portions of the ciliary muscle to be contracted, others not, so as to produce a sort of double lens.

Mr. JAMES ADAMS brought before the Society two cases of Suppurating Inflammation of both Eyeballs from Embolism occurring during an attack of recent endocarditis, following upon old valvular disease, the result of rheumatism. In one case the affection of the two eyes was almost simultaneous; in the second there was an interval of about a week between the occurrence of the inflammation of the eyes. In each case there were loud cardiac murmurs, tumultuous heart action, and high temperature. Both cases were fatal; one with numerous other emboli infarctions, and in the other there were none. Both died in a "typhoid" condition. The chief question raised was, Why do emboli under these conditions lead to suppurative panophthalmitis? Is it because they are septic, or is it due to mechanical causes? In the first case a complete examination was made, but no micrococci or bacteria were found. In the second case no post mortem could be obtained.

Dr. BRAILEY read notes of a case of Tuberculosis of the Iris, observed by himself and Dr. Edmunds, which was particularly interesting from their observations upon the histological characters of tubercle. From the position of the giant-cells in the growth they thought these bodies must be regarded as cells in process of regressive change.

Dr. WALTER EDMUNDS showed microscopical sections from two cases of Perineuritis Optica. The first case was a child eight years of age, who was run over by a cab and received injuries which proved fatal in twenty-four hours. At the post-mortem examination there was found a rupture of liver and kidney, and a fracture of the skull in the middle fossa. The fracture did not pass into the optic foramen or orbit, nor into the immediate neighbourhood of the optic nerves. There was also some meningitis. On microscopic examination, it was seen that the space between the two sheaths of the optic nerves was distended with a dense mass of inflammatory products, with some fibres and bloodvessels among them. There was some inflammation of both sheaths of the nerve and in the nerve itself. The inflammation was more marked at the surface than towards the centre, as if the inflammation were spreading inwards. There was some swelling of the optic disc, but hardly sufficient to be recognised with the ophthalmoscope. The other case was one in which there had been abscess of the brain; the pathological appearances were the same. It is fully reported in St. Thomas's Hospital Reports.

Mr. SYMPSON showed a specimen of Tubercular Growth in the Cerebellum, with Optic Neuritis, from a boy seven years of age, who had suffered from scarlatinal nephritis a few years before. There was much ventricular effusion, some basic meningitis and numerous tubercles in posterior lobe of cerebellum, as well as ulcers in intestine, and tubercle in mesenteric glands. Mr. Sympson thought the optic neuritis due rather to the renal than the cerebellar disease.

MEDICAL SOCIETY OF LONDON.

President's Address. — Ulceration of the Tongue.

AT the meeting of this Society, on the 17th inst., Dr. BROADBENT, the President, in his opening address, said that anxiety must be the predominant feature of anyone occupying that chair, as to whether the new medical year would be a fruitful or unfruitful one, for it must make a great difference to sufferers which of these it was to be. The course of science could not be stayed by an unfruitful year, yet it might be diverted and the Society thus lose credit. The work of the Society was the organisation of professional opinion. It was in their meetings that much which afterwards came out in the form of books was suggested. Young men acquired a store of latent force, and then to this fuel was applied the torch of the energetic secretaries. The importance of everyone putting down on paper what he thought was specially referred to; it enabled the writer to detect his weak points in the chain of argument, and opened up new ideas. Then came the benefit of criticism on the paper when it was submitted to the Society. Looking back to the past, he found that there had not been a meeting at which a paper had not been contributed of high value, and if the papers of the new session were as valuable, he should close this year of office with feelings of great satisfaction.

Mr. JONATHAN HUTCHINSON then read a paper on Ulceration of the Tongue. He prefaced his paper by remarking that he would not attempt any elaborate citation of clinical evidence, but rather endeavour to bring out prominently some of the more important features of ulceration of the tongue, with a view to discussion. He would leave out all account of acute and congenital affections, and restrict his

attention solely to the effects of chronic inflammatory action. He then proceeded to lay down lines for the differential diagnosis of syphilitic and non-syphilitic sores, and referred to the influences, local and general, which might compete with or complicate the "great mother of maladies" in the production of the lesions in question. He passed in review the various names given to the different pathological conditions, finding especial fault with the term "mucous patch," or "plaque muqueuse"; and challenged defence of the name "ichthyosis." He remarked that the conditions to which the term had been applied were simply exaggerated examples of chronic glossitis, and had no analogy to true ichthyosis linguæ. Ichthyosis linguæ might, however, exist as part of a general and congenital condition. So with the term psoriasis linguæ; it should only be used in cases in which it is associated with a general eruption. The forms of glossitis which occurred in the secondary stage of syphilis are as variable as are those of the skin eruptions. He then treated of the abraded patch—a superficial ulcer; of the papillary patch, the bald patch, and the circinate patch. First among the causes of chronic glossitis must come of course syphilis, but the tongue is also apt to be irritated by certain articles of food, by alcohol, drugs, tobacco smoke, by rough teeth, or by the teeth filled with amalgam, effervescing waters taken in excess; also cheese and sugar were, in certain cases, of prejudicial influence. Among the most common results of irritation were wasting of the papillæ and thickening of the basement membrane, denoted first by bald patches and subsequently by bluish-white ones; with these might be seen fissures or ulcers as conditions of temporary aggravation. Mercury was well known as provocative of ulceration. All forms of disease of the tongue are much more frequent in men than in women; and with the exception of sores produced by dental irritation, well-marked examples of leucomata in women were rare; so also was cancer of the tongue rare with them. He drew a comparison between certain syphilitic patches and those of disseminate choroiditis. He then went on to speak of that peculiar condition which he termed the fern frond pattern, and ended his address with a few remarks upon the diagnosis and treatment of cancer of the tongue, adverting to the manner in which chronic glossitis may serve as a precursor of malignant processes. — Mr. MASON was interested in learning Mr. Hutchinson's opinion that many of these cases of white-patched tongue were not of syphilitic origin. That opinion coincided exactly with his own. He had seen white patches in the mouth produced by red vulcanite plates.—Mr. BRYANT was glad that Mr. Hutchinson affirmed that many of the diseased patches were but the result of inflammation. He (Mr. Bryant) was also of opinion that syphilis was the chief cause of the inflammation, but that not a few of the cases were marked by dyspeptic or some other troubles. He had known a case of chronic glossitis, with induration and infiltration, in a man who passed enormous quantities of lithic acid. The man had suffered from disease of the tongue for eighteen years, but he was a water-drinker and not a smoker. He did not think that all cases of leucoma of the tongue were not secondary to inflammation, but that they might come on slowly, and as new papillary growths. That some patches were associated with considerable changes in the deeper parts, and that some showed many characteristics with epitheliomatous infiltration. He also thought that in these old cases of atrophy and other diseases of the tongue no specific treatment did good. In suspicious cases he was in favour of early and energetic treatment.—Dr. RADCLIFFE CROCKER referred to the paper read at the Congress by Professor Ernst Schwimmer on the subject, pointing out that many of the cases were not of syphilitic origin. He had never seen such cases associated with ordinary psoriasis.—Mr. BUTLIN agreed that mercury was of no avail in the old syphilitic lesions of the tongue. He had seen associated conditions of eruptions upon the hands and upon the tongue. He was not inclined to agree with Mr. Hutchinson that in the smooth tongue the epithelium was increased in quantity. On the contrary, he believed that the smooth tongue was rather in the condition of scar tissue, and he traced a close connexion between the scar tissue and an epitheliomatous infiltration.—Mr. HUTCHINSON, in reply to a question by Dr. Berkart, said that he had purposely left out reference to parasitic patches upon the tongue. He wished to imply that most of the leucomatous patches came after inflammation, but that no doubt some appeared with the very smallest amount of inflammation. Red vulcanite, like any other irritant, might produce an initial inflammation. The ulcers occurring in association with indigestion constituted an important group, but he had not had time to refer to this. He did not differ much from Mr. Butlin, but objected to his application of the term "smooth tongue." He referred to the value of Mr. Fairlie Clarke's work upon the subject. He had seen but one case of epithelioma which took its origin in scar tissue; it was rather the chronic inflammatory irritation that was the starting-point of malignant disease.

Reviews and Notices of Books.

Coulson on the Diseases of the Bladder and Prostate Gland. Sixth edition. Revised by WALTER J. COULSON, F.R.C.S., Surgeon to the Lock Hospital, &c. London: J. & A. Churchill. 1881.

THE last edition of this work was published more than twenty years ago, and the editor of the present one has had to make considerable alterations and additions to give a fair presentation of our present knowledge of the matters treated. Although several excellent treatises on special affections of certain of the diseases of the urinary organs have appeared during this period of twenty years, it is somewhat strange that no English author has produced a systematic work on all the surgical affections of these parts; and Mr. Coulson, in the exercise of his discretion as editor of this edition of his uncle's work, has not seen fit to make it complete by chapters on the injuries and diseases of the urethra. The general impression produced by a careful reading of the work has been that it is in places too discursive, occasionally not sufficiently precise, lacking in pathological accuracy, and wanting in practical detail. Too much of the old book, which has become antiquated, has been allowed to remain, while a good deal of matter that ought to have found a place has been omitted. Another marked feature is the paucity of illustrations, of which only twenty-two are scattered over the nearly six hundred pages of text. As justifying this criticism, we will mention a few of the points on which we think the editor hardly does justice to his subject. In discussing the treatment of rupture of the bladder, we find no reference to the important discussion on this subject at the Royal Medical and Chirurgical Society in 1879, raised by a paper by Mr. Heath, relating a case where he had practised the suture of the wounded viscus under antiseptic precautions—a debate in which several eminent surgeons joined, and important facts were stated. Indeed, any text-book of surgery gives more assistance to the surgeon seeking guidance in the management of such a case than this special work. As an instance of the loose way in which the facts of pathological importance are stated, we take the following. On page 123, speaking of "surgical" kidney, we read: "Upon making a section of a kidney so diseased, we find that, although apparently of large size, it consists in great part of dilated tubes, and that the true vascular or secreting part is in smaller proportion than usual." On page 141, in reference to the same subject, we read: "If the disease [chronic cystitis] has spread along the mucous lining of the ureters to the tubular structure of the kidneys, these canals will appear filled with a muco-purulent fluid, and the kidneys will present the morbid appearances characteristic of pyelitis." In this description it would have been better, we think, if the structure of the renal organ had been recognised. Although in other places "surgical" kidney is alluded to in various ways, yet we do not find a careful and complete account of its true nature, or of its varieties, nor even the mention of the fact that there are the two obvious forms, the acute and the chronic. In the same way the means of diagnosing this affection are most meagrely given, no mention being made of the lessened excretion of

urea, nor of the large amount of limpid urine of very low specific gravity (which is poured out from the chronically diseased kidney, with the occasional presence of a small amount of albumen). In chronic cystitis we are told that "the corpuscles [of the discharge] cohere into a gelatinous tenacious mass"—a statement sadly wanting in scientific accuracy. Another oversight has been to leave the chemical formulæ for urea and uric acid in the old notation. On page 458 we are told that the only sure way of recognising the existence during life of disseminated abscesses in the kidney is by the finding of fragments of renal tissue in the sediment of the urine. No doubt, if such fragments are ever present, or can be distinctly recognised, their presence would be of great diagnostic value; but Mr. Coulson omits altogether to give any *proof* that they have ever been so detected, and fails either to figure these fragments or describe their appearance even in the most general terms. Again, on page 430, in the directions given for passing the lithotrite, we meet with the statement that while the instrument is traversing the membranous urethra the left hand should press on the pubes to relax "the triangular ligament": what is meant is the suspensory ligament of the penis!

If we turn to the more practical parts of the book we still meet with the same lack of full and necessary detail, but we have not left ourselves space to notice more than two examples. Among the modes of treating chronic vesical catarrh we find no mention of the injection of either quinine or bichloride of mercury; but quinine is probably more largely and successfully used for this affection than any other drug, and the mercurial lotion is most potent in obstinate cases. The description of Bigelow's operation for stone in the bladder is treated separately from that of "Lithotrity," and no distinct opinion is given as to the respective value of what we may call the old and the new operations of lithotrity. But this is the most important improvement in the surgical treatment of the affections of the bladder introduced in recent years, and it is surely worthy of the most careful and detailed consideration at the hands of one who professes to speak with authority on such matters. The surgeon will not find any guidance from Mr. Coulson as to when and why Bigelow's operation should be preferred to the older plan, while especial stress is laid on the importance of not extracting any fragments in the old operation. While, then, the volume before us contains a large amount of valuable information, the scientific student will miss in it that pathological and clinical accuracy which is essential for his purpose, and to the practising surgeon it will not prove a perfectly satisfactory guide in the management of surgical urinary diseases.

Médecine Vieille et Médecine Nouvelle. Par Dr. MARIANO SEMMOLA. Traduction de M. le Dr. L. GIRARD. Paris: J. B. Baillière et Fils. 1881.

THE author of these spirited lectures, which are introductory to a course on Therapeutics at the University of Naples, took a prominent part in the proceedings of the Section of Medicine at the late Congress, and contributed much to the debates in that section. He is a keen upholder of clinical observation, and in these pages criticises freely the modern tendencies towards pathological speculation beyond the region of fact. He deplores the want of originality in Italian schools, and the over-ruling desire to adopt views which have their birth in Germany, and in a lengthy preface written specially for this French translation he deprecates the hold which hypothesis is taking in medicine, and especially the doctrine of "parasitism," which seeks in the discovery of organisms for a solution of so great a variety of morbid processes. The tenor of the lectures themselves—seven in number—is the constant endeavour to aim at establishing a system of therapeutics based upon the rigorous observation of clinical facts, and of the conditions under which the treatment of disease is pursued. His main contention is that we are threatened in these times with a system based on pathological anatomy as harmful to true progress as the old systems which have had their day and ceased to be. Dr. Semmola somewhat exaggerates the evils which he thinks are likely to accrue from this servile adherence to the facts of diseased structures, but at the same time there is some truth in his remarks, and we may commend the perusal of them to our readers. They will find them at once pleasant and instructive.

Indigestion and Biliousness. By J. MILNER FOTHERGILL, M.D. London: H. K. Lewis. 1881.

THERE is a common character about Dr. Fothergill's later writings reminding us in no small degree of the late Polytechnic Institution — where much amusement was afforded, combined with a little instruction. The subject of indigestion has always been a favourite theme to write upon, and with the classical writings of Murchison and Wilson Fox before us we should have thought that even Dr. Fothergill might have failed to suggest a new line of research. It appears, however, from a perusal of the preface and introduction, that the subject has not been treated by other writers from a physiological standpoint, and so the author has undertaken to supply the deficiency in this direction. Dr. Fothergill considers the subject of indigestion under three heads: (1) Primary, (2) Secondary, (3) Intercurrent. We have accordingly only to determine which form of impairment is present, and our course of treatment at once becomes clear. Unfortunately, however, though Dr. Fothergill entices us on by the delightfully easy paths of (1) imperfect disintegration, (2) defective solvent power, and makes plain to us how indigestion may be due to impairment of any of the digestive juices, he does not give us distinct clinical directions by which we may determine which form of impairment is present. The chapter devoted to the consideration of the subject Intercurrent Dyspepsia will probably hand Dr. Fothergill down to posterity as an unrivalled writer of similes, for in the first page and a half the reader has presented to him the picture of (1) a bright summer day; (2) a passage in the life of Elijah and Ahab; (3) the fate of the *Eurydice;* (4) a typhoon; (5) the stormy petrel; (6) the gallant captain of a craft in danger furling his topsails; and (7) the experienced general outwitting a flank movement. Having thus exhaustively treated dyspepsia from a physiological standpoint, Dr. Fothergill next proceeds to the subject of biliousness. This portion of the work is more satisfactory; an excellent summary is given of the functions of the liver and of the recent observations of Albertini and Schmidt-Mülheim on the effect of the injection of peptones into the general circulation. Following this we have the rationale of an acute bilious attack resulting from free indulgence in rich food well explained, and the treatment thereof; and it is here we meet with some original work of the author. The succeeding chapter, however, is almost entirely made up of quotations from Murchison, Michael Foster, Professor Garrod, Henry Bennet, William Roberts, Prout, Parkes, Handfield Jones, Basham, Lauder Brunton, Hyde Salter, Paget, Budd, and Leared. The general reader will no doubt find Dr. Fothergill's work a pleasant and amusing guide to the dry scientific facts concerning the physiology and pathology of digestion; to the professional reader, however, we think it can only prove serviceable as an index to the works of the writers the author has so freely quoted.

AN Association has been inaugurated in Mile-end Old Town with the object of aiding the funds of the Victoria-park Hospital.

"THE LANCET" INQUIRY
UPON
SCHOOL MANAGEMENT AND HYGIENE.

III.

SANITARY ARRANGEMENTS OF SCHOOL BUILDINGS.

Dormitories.—At different schools the arrangements of the dormitories vary considerably. In a few schools—fortunately the system is very far from being a general one—the study and dormitory are combined. This arrangement is decidedly objectionable from a sanitary point of view, and unless the strictest supervision is exercised, there is a greater risk of vicious habits being acquired and passing undetected than with the publicity of larger rooms, which often acts as an effectual check on such offences. Large dormitories containing from twenty to thirty beds, or even more, are in favour with some school authorities, as they can be kept under better sanitary and general supervision than smaller rooms. The chief objection, however, to the system of large dormitories is, that if scarlet fever or other contagious disease be introduced into the school, there is more danger of its spreading rapidly, and a greater difficulty in isolating the cases, than if the inmates are more distributed. The general consensus of opinion seems to be in favour of medium-sized dormitories, containing from ten to fifteen beds. With regard to the question of "cubicles" opinion is more divided. Some strongly advocate their adoption; others as strongly condemn them. From a sanitary point of view, we think they interfere with the free circulation of air through the dormitory, and therefore, if employed, should not be carried up too high above the bed head. The question how far they influence school-boy morality is also a matter of dispute. Personally we do not take the unfavourable view of school-boy morality that many do. We believe evil practices to be confined, as a rule, to a very small section of a school community, and that the general feeling of the majority of the boys is against such offenders; and we are therefore of opinion that there is less risk of such practices being committed with the open dormitory system than with cubicles.

As the longest period of the twenty-four hours is passed in the dormitories, it is important that the atmosphere should be kept pure and fresh. As warming the dormitories, except during very severe weather, is not advisable, there may be some difficulty in securing a sufficient movement in the air for its frequent renewal. The initial cubic space, therefore, for each boy should be much larger than in the case of school and class-rooms, and should certainly not be less than 700 cubic feet. It is also of the greatest importance that no air from privies, urinals, drains, or cesspools find access to the sleeping rooms. The general closets and urinals ought therefore to be kept quite distinct from the buildings containing the dormitories. For night emergencies a closet situated at the far end of the building, and well shut off by doors from the passages, should be provided. It is advisable that this closet should not discharge directly into the main drainage of the building, but be connected with it by a separate drain, which should be well trapped both at the point where it leaves the building and where it joins the main drain. The soil-pipe ought, if possible, to be outside the building, and it should be well ventilated; of course it is important that no dormitory windows be near it. In the same way the waste-pipes from baths, washing basins, and sinks connected with the dormitories should be disconnected entirely from the sewers. In this case no reliance should be placed on traps, which are liable to become dry or be sucked out; but the pipes should be brought through the wall of the building and the ends cut off a foot or so above the ground, and their contents allowed to fall into an open gutter, which should run some little distance from the building, and then discharge into the main drainage through a well-trapped grating.

The importance of taking these precautions cannot be too much insisted on. The inhalation of sewer gas, even when free from the suspicion of containing the specifically infective poison of typhoid, is highly prejudicial to health, especially to young persons, and boys exposed to it speedily fail in condition, become pallid, jaded and listless, even if more serious mischief does not ensue. We had occasion once to examine a small dormitory which had an ill repute in consequence of several boys in succession who had been put to sleep in it having sickened, some seriously. The room had been a bath-room, but had been converted into a dormitory owing to a sudden increase of numbers. All the baths except one had been removed; this bath, however, was never used, and its waste-pipe communicated directly with the sewer. If it were trapped the trap must have been dry from disuse of the bath, consequently the sewer gas had free access to the room. It may be added that the other inmates of the school were healthy, only those who had slept in that dormitory suffered. Another instructive example, showing how, in a case where much thought and money had been spent in making a house wholesome, all had been frustrated by the carelessness of the workmen who had carried out the work, has been supplied us by a distinguished member of our profession, and we relate it in his own words:—"In the autumn of 1878 I was called to one of our large public schools to see a boy who, it was stated, had been seized with inflammation of the lungs. This proved to be the case, but from the first it was a matter of question whether or no the lung trouble was secondary to typhoid fever. The symptoms which subsequently showed themselves, previous to the lad's death, left no doubt on my mind that typhoid was in reality the cause of all the trouble. The gentleman in whose house the boy died (and others had been similarly attacked at previous dates) gave me every opportunity of inspecting the house, with the object of discovering the cause of the mishap. The house had been newly built, was specially designed for the purpose to which it was put, and was fitted with every modern appliance. The house drained into a cesspool situated many yards from the house in an adjoining field. This cesspool, however, was not ventilated, so that any gas generated in it would be pressed back towards the house. There were two dormitories in which the boys slept (fifteen in each), placed above each other on the first and second floors. The cubic space would have been considered ample had not the beds been surrounded with 'cubicles' allowing a very small area to each bed, and effectually preventing efficient ventilation. In each dormitory was a slop-sink for the use of the housemaids, the waste-pipe from the sink in the upper ward joining that from the sink in the lower ward, and then travelling together to the outside wall. Both sinks were furnished with a trap, and in order to prevent any direct communication with the cesspool, the waste-pipe which was common to the two sinks had been made to terminate over a wide flange-ended water-pipe which ran into the drains. It was thus theoretically impossible for any pressure of gas from the cesspool to be felt in the waste-pipes of the sink. The deceased lad had slept in a cubicle in the lower dormitory, and the slop-sink was close to the end of his cubicle. In the first place it must be borne in mind that the rush of water from the sink in the upper dormitory past the junction-pipe of the lower sink would certainly empty the trap of the lower sink, so that it is certain that the lower sink must very frequently have been unprotected even by a water-trap, which is but a poor protection against sewer-gas at the best. Having examined the sinks, we went outside the house, and by means of a ladder examined the termination of the waste-pipe of the sinks over the water-pipe. Here, to our amazement, we found that the arrangement which was meant to prevent the backward pressure of the gas from the cesspool had been destroyed by the waste-pipe of the sinks being *securely cemented* into the water-pipe, so that any pressure of gas from the cesspool would certainly be felt in the waste-pipe. Thus practically the deceased lad had slept with an untrapped pipe leading into a cesspool close to the foot of his bed. Here, then, was cause sufficient for the disaster which had happened. This house was further provided with a lavatory furnished with tip-basins and baths, the waste-pipes of which ran into the cesspool, so that here again was an opportunity for gas from the cesspool to enter the house."

Closets and Urinals.—These should be placed at some little distance from the main buildings, but connected with them by a covered way, so that the boys can use them without being exposed to the rain in wet weather. In some establishments we have noticed a very ingenious arrange-

ment, by which during the day the closets are shut off from the house, the boys having to enter them from the outside; at night they are opened to the house by means of a passage. Each closet should be separated from its neighbour by a wooden partition. If waterclosets are used it is important to see that they are properly flushed, by supplying an amount and force of water thoroughly to cleanse the pans. Each closet should be fitted with a separate cistern of its own, capable of holding at least three gallons, and its discharge should be ensured by an automatic arrangement, and not left to the usually perfunctory method of drawing the closet handle for a second or so. The soil-pipes of all the closets should be thoroughly ventilated, and the partitions between them, together with the building in which they are collected, and all passages leading to them, should be well provided with windows and open gratings, in order to secure the freest possible circulation of air and prevent any undue concentration of effluvium. Earth closets are particularly suitable for schools, and, where labour sufficient can be provided to attend to them, leave nothing to be desired. Earth closets in which provision is made for carrying off the urine without allowing it to mix with the solid excreta are the best. Urinals may be situated in the same buildings as the closets, but never in the same compartment. The simplest form of urinal is the best; a slate slab, which can be kept thoroughly sweet and clean by means of a strong stream of water from a water tap, instead of the miserable little jets which too often only dribble from the perforated iron pipe. It need hardly be insisted on that the closets and urinals should be kept scrupulously clean, and that it ought to be the duty of some responsible member of the school to make a daily inspection of these premises. In conclusion, it may be observed that an inspection of all closets, urinals, school drains, &c., should be made each vacation, and repairs executed before the return of the scholars. Supposing, however, a breakdown occurs during term time and repairs have to be executed, it is important that whilst these are being done the boys should be kept at a distance from the field of operations. We have already mentioned how extremely susceptible young persons are to the influence of sewer emanations, and several instances of rapidly fatal poisoning are recorded as having taken place at schools from exposure to the concentrated effluvium from drains or cesspools when cleaned out. Thus, for instance, in the case recorded by Dr. Murchison of a school in which twenty out of twenty-two boys within three hours were seized with fever, vomiting, purging, and excessive prostration. One other boy, aged three, had been attacked with similar symptoms two days before, and had died comatose in twenty-three hours; another boy, aged five, died in twenty-five hours; all the rest recovered. Suspicions were entertained that they had been poisoned, and a rigorous investigation ensued. The only cause which could be discovered was that a drain at the back of the house, which had been choked up for many years, had been opened two days before the first case of illness, cleaned out, and its contents spread over a garden adjoining the boys' play-ground. A most offensive effluvium escaped from the drain, and the boys had watched the workmen cleaning it out. A similar outbreak occurred in 1873 in a charitable institution at Wandsworth from the opening of choked-up drains, and it was in the investigation of the circumstances connected with this lamentable affair, with a view of reporting them to THE LANCET, that Dr. Anstie imbibed the poison that proved fatal to him, and caused the premature closure of a distinguished career.

THE CONNEXION OF THE SCHOOL WITH THE TOWN.

Diseases originating in the town can be introduced into the school in three ways—(1) by emanations from the sewers or cesspools; (2) by the supply of sewage-polluted water; and (3) by direct intercourse with the townspeople. It is therefore important that the school be isolated as much as possible from the town in or near which it is situated. Such no doubt was the condition obtained for our older public schools at the time of their foundation. Eton was separated from the town of Windsor by the river Thames, the growth of the township of Eton being of a date subsequent to the foundation of the College. At Winchester, the Cathedral and Close intervened between the College and the town; Harrow and Rugby were mere hamlets at the time the schools were founded. Now, however, most schools are more or less surrounded by houses, and considerable towns have begun to form round them. The policy therefore which schools in such circumstances ought to pursue is to render themselves as independent as possible of the town. This should be done by securing, where possible, a system of sewage-removal and drainage separate from that of the town, or where that is not practicable, by seeing that the town sewers near the school-buildings and boarding-houses are sufficiently ventilated, and efficient traps interposed at the junction of the school-drains with the sewers. With regard to the water-supply, the difficulty of obtaining a separate supply is oftentimes extremely great. Very few schools situated in towns could obtain, as Marlborough has done, an excellent and sufficiently abundant supply on their own premises; but where the town water can only be obtained, efficient filtration should be adopted before distribution. It is desirable that the intercourse of the boys with the townspeople be limited as much as possible, and that all washing of clothes and linen be done on the premises.

Sewage Removal.—Sewage removal may be considered in reference to sewers, cesspools, interception-tanks, and the dry earth system.

Sewers.—When the school is situated in the centre of the town little advantage, probably, is to be gained by adopting a separate system of sewage removal, since the school being already in close proximity with the sewers and drains of neighbouring houses would be nearly as much exposed to outside emanations of sewer gas, supposing the sewers to be defective or their ventilation inefficient, as if the school communicated directly with them; whilst, by taking proper precautions, it is not difficult to prevent the sewer gas from passing from the town drains into those of the school and exclude it from the interior of the building. Again, in the midst of a large town it is difficult to secure a separate system of drainage, or to apply, conveniently, other methods of sewage removal. When, therefore, the school, from its situation, is obliged to place itself in connexion with the town sewers, and is also in close proximity with the drains of neighbouring houses, the following precautions should be taken.

To prevent the entrance of sewer gas within the buildings efficient water-traps must be interposed at the junction of all the school drains with the sewers, and a ventilating shaft carried up from this immediately behind the trap to some point above the roof of the house. There are many varieties of water trap employed for connexion with sewers, but the simplest are the best. As traps depend for their efficiency upon the power of the water contained in them to arrest the passage of sewer gas, which otherwise would be drawn from the drains by the action of the warm house air into the building, it is important that the trap be kept always full of water, otherwise it may be a source of unsuspected danger. It ought not to be forgotten that traps may become dry from the drains not being used for a time, as may occur with some of the school drains during vacation time, or they may become clogged from improper materials being thrown down the closets, or they may empty themselves as soon as filled from inequality of the level on which they are laid, either from an original fault in the laying or from a subsequent settlement. All traps therefore should be systematically inspected at regular and tolerably frequent intervals. The best time for doing so in the case of schools is obviously during the vacation. There is one other way in which a trap may be emptied—that is, by the aspiration of its contents from alteration of the atmospheric pressure in the discharge and delivery tubes. This danger can be provided against by the mouth of the drain as it enters the sewer being guarded with a flap-valve, and the trap well ventilated. In addition, however, to efficient trapping of the school drains at all points where they discharge into the town sewers, it is of the greatest importance to get rid of any sewer gas which by mishap may find an uninterrupted passage to the house owing to failure of the traps. This is done by placing a ventilating shaft in the drain at the point where it leaves the house, and carrying it up by the wall to a point above the roof, or, at all events, some distance beyond the level of the windows of the highest bedrooms. The greatest care should be taken to see that the junction between the ventilating shaft and the drain is made thoroughly good, and that there is no leakage either of gas or sewage. As a rule, the diameter of the ventilating shaft is too small; it should not be less than two and a half to three inches. Its mouth should be protected by a revolving cowl to prevent down currents of air. In order to keep the house-drains sweet, and to permit the ready escape of effluvium that may result from retained deposits, they should be ventilated at other points

besides the junction at the sewer. For this purpose the best plan is to utilise the soil pipes of the closets either by carrying them up and letting them open above the roof, or to place a ventilating pipe below the trap of the closet, and bring it out through the wall, and then carry it up alongside the wall to the roof. Lastly, it is of importance to see that the house-drains themselves are of sufficient calibre to carry off the sewage and other matters passed into them, otherwise they will get clogged; or else "running full," will, by the aspirating action induced, suck out the contents of the traps of the closets and sinks. It need hardly be remarked that in the construction of new or the alteration of old buildings efforts should be made to arrange that the house-drains do not pass under the basement of the school buildings. Where architectural exigencies prevent this arrangement being adopted, thorough and well distributed ventilation of the house-drains is imperatively demanded.

To prevent the diffusion of sewer gas around the school precincts, all gratings and gullyholes for the purpose of carrying off mud, sweepings, rainwater, &c., in the playground and school courts should be thoroughly trapped. These traps should be frequently examined to see that they are in working order, and in hot or dry weather water should be poured daily in each of them to prevent their becoming dry. To avoid diffusion of sewer gas from neighbouring houses is a matter of greater difficulty. Whenever there is reason to suspect that, owing to defects in the drainage of a neighbouring house, sewer gas makes its way to the basement of the house that happens to be next to it, the best plan is first to make a friendly remonstrance, and should that fail to represent the matter to the sanitary authority, who will at once take steps to remedy the nuisance. A thorough inspection of all basement premises should be made at least twice a year. The escape of sewer gas from a neighbour's drain is more frequent than is generally supposed, and where the drains are of brick and rats abound the risk of such an occurrence is especially imminent. Moreover, a systematic inspection of the basement offices and outhouses often leads to the discovery of other insanitary conditions, such as of heaps of rubbish, dust, and decaying animal and vegetable refuse.

IRISH UNION HOSPITALS.

AT a meeting of the executive committee, held at the Hibernian Hotel, Dublin, on the 29th ult., Dr. Mayne in the chair, the following resolutions were proposed by Dr. Adrien, seconded by Dr. Holland, and adopted:—

"That we tender to THE LANCET the hearty thanks of Irish union hospital physicians for the influential and thorough support which it has given to our movements."

"That, in consequence of the Queen's College opposition, application be made to the leading Scotch licensing bodies for recognition, and that a deputation do proceed to that country for the purpose of concluding all arrangements."

"That we strongly protest against the exclusion of provincial men from the witness table of the medical commission, and we feel satisfied that public opinion will endorse this protest."

"That we again urge all union hospital men to unite as one man,—a course which is all the more incumbent on them after the gratuitous insults heaped on us in some quarters."

"That Dr. Laffan be requested to bring under the notice of the Irish College of Surgeons, and subsequently, if necessary, under that of the General Medical Council, the irregularities which are constantly perpetrated on the various medical curricula by certain interested parties in Dublin, who openly advertise for apprentices, to whom they pretend to allow sufficient time for lectures, &c., though such time is wholly insufficient to satisfy the regulations of the Colleges."

"That the meeting has heard with satisfaction, from Dr. Moore of Cavan, that it is an error to suppose that Irish union hospitals are not recognised, and that the proofs he has adduced of such recognition, not only by Irish, but by some English bodies, shall be published, if necessary, by our hon. secretary."

"That the thanks of this meeting be given to Drs. Hayden, Lyons, and Cruse for their promises of support in the Royal University Senate; and that the attention of all union hospital men be directed to the attitude of some of the Queen's College senators, whose hostility, if persevered in, should leave no alternative to every union hospital physician, who pretends to the possession of the slightest self-respect, but implacable hostility to the Queen's Colleges Medical Schools."

"That Dr. Holland be appointed treasurer; and that all union hospital physicians are hereby called on for subscriptions."

The deputation appointed to wait on the Royal University Senate laid all the necessary documents before that body, and eloquent speeches in favour of their claims were made by Drs. Hayden and Lyons. The Senate has, however, been too pressed with business to proceed immediately with the consideration of the application, and such consideration remains over for the present.

New Invention.

THE "NE PLUS ULTRA" FEEDING-BOTTLE.

THIS feeding-bottle, which has been invented by Mr. E. O. Day, the house-surgeon of the Royal Hospital for Women and Children, Waterloo-road, S.E., presents many solid advantages. In the first place there are very few junctions; the cork and tube are in one piece, and are made of vulcanised india-rubber. The bottle itself is quite plain and smooth on the inside, so that it is very easily cleaned, and there are no grooves or recesses to form a lurking place for sour milk to act as a leaven upon the fresh milk. No porous material is used in its construction. There is no cork or cork-rim, and nothing but glass and india-rubber enter into its composition. It is one of the best bottles we have seen, and it well deserved the award of merit which was accorded it at the late Medical and Sanitary Exhibition.

APPOINTMENTS TO SCOTCH LUNATIC ASYLUMS.

To the Editor of THE LANCET.

SIR,—Your valuable journal has lately devoted a good deal of attention to the English Commission in Lunacy. It might not be amiss if the Scotch Board in their turn came under your consideration. Interference in appointments of asylum medical officers is the chief point requiring correction. It matters not whether the interference has been at the request of a district lunacy board collectively or of some of its members, still it is interference which should not exist.

The special case at present is, that at a meeting of the Fife District Lunacy Board, on the 4th October, it was resolved to ask Dr. Fraser, Deputy-Commissioner in Lunacy, to nominate a successor to the vacancy caused by the lamented death of Dr. Brown. A lengthy account of the meeting appeared in papers of good standing. If Dr. Fraser accepts this patronage some decided action should be taken.

Abuse of place and position by officials has at times caused the abolition of the board they belonged to. If I recollect correctly, some years ago a special commission, with Lord Camperdown as chairman, among other matters of inquiry took evidence as to the necessity for having so large a commission of lunacy in Scotland. Interference in matters clearly outside their duties may necessitate, or at least give grounds for, reopening this question.

Trusting that you will take the matter up,

I am, &c.,

October 15th, 1881. A LATE ASYLUM ASSISTANT.

*** We insert this letter, and at first thought there must surely be some misapprehension as to the fact of such a request having been addressed to a member of the Board of Commissioners. The functions of that body are purely supervisional, and any attempt to give patronage to the Board, or to entrust the management of asylums to the Commissioners, or to ask them to nominate officers, would be contrary to the spirit of the law. We understand, however, that the strange request was really made. Dr. Fraser has, as a matter of course, and very properly, declined to nominate a successor to the vacancy.—ED. L.

THE LANCET.

LONDON: SATURDAY, OCTOBER 22, 1881.

IN endeavouring, a fortnight ago, to trace some of the events that led to the conception in JOHN HUNTER'S mind of his operation for the cure of spontaneous aneurism, we referred, after Professor OWEN, to the experiment of tying the carotid artery of a stag in order to study the effect on the growth of the corresponding antler, which is commonly believed to have first convinced HUNTER of the practicability and the safety of applying a ligature to the main arterial trunk without destroying the vitality of the distal part of the limb. In conclusion, we hinted that not only was the art of surgery, through HUNTER, enriched by this experiment, but that further appeals to vivisectional experiments were needed for the scientific application of the principle involved in the Hunterian operation and for its ultimate perfection. These experiments, perverted as they have been by fanatical zoophilites, have, we repeat, proved of signal service alike to humanity and science, and have resulted in an aggregate prolongation of human life of hundreds of years. In one instance JOHN HUNTER himself, by his operation, was able to prolong a man's life for fifty years, by curing him of a popliteal aneurism.

We wish now more particularly to relate what it was that HUNTER and his immediate successors accomplished, and how far their beneficent labours were aided by appeals to vivisection.

At the time that JOHN HUNTER performed his first operation, in December, 1785, English and Continental surgeons were widely at variance as to the proper mode of dealing with cases of popliteal aneurism. Some allowed their patients to die practically unassisted by art; a few killed theirs in attempting to cure them by performing "the operation for aneurism"—that is, opening the sac and tying the artery at both ends; one or two, perhaps, performed ANEL'S operation without success; while others amputated the limb at the lower part of the thigh, as the only means of saving the patient's life. "Experience had abundantly shown," as EVERARD HOME remarks in his account of HUNTER'S experiments and observations, "that all the modes hitherto practised were exceedingly precarious, being rarely attended with success, and the death of the patient being commonly the consequence of the failure of the operation." So dangerous was the usual "operation for aneurism," that, as HEISTER relates, the expert and intrepid HILDANUS was deterred from undertaking it, and RUYSCH openly declared no surgeon in the city of Amsterdam had performed it for twenty years before himself. HUNTER had himself frequently performed it, but had found it generally fail, and this led him to consider the matter "with more than ordinary attention." The stages of evolution of his own method seem to have been regular, and eminently scientific. He first satisfied himself that an aneurism is usually confined to a limited portion of the arterial system, and does not affect, as BROMFIELD maintained, the whole of it; and then, that in all cases of spontaneous aneurism the coats of the artery, at the beginning, are the seat of peculiar pathological changes, and that the dilatation of the walls of the artery is a consequence of this change, and not, as WISEMAN and FREIND had alleged, the result of traumatic rupture of the arterial tunics, nor, as HALLER had asserted, of mere weakness of the walls. Indeed, as regards the opinion of HALLER, it is interesting to note that HUNTER himself performed special vivisectional experiments, and instructed HOME to perform others for the purpose of testing its truth or fallacy. This was done in HUNTER'S case by exposing the carotid artery of a dog for an inch in length, removing the external coat, and afterwards dissecting off the other coats layer by layer, till what remained was so thin that the blood was plainly seen through it. The dog was then left to itself, and recovered. In about three weeks it was killed in order that the tissues might be examined. The parts around were consolidated, "and the artery was neither increased nor diminished in size." This experiment was, therefore, not only instructive, but absolutely necessary for the scientific development of the principle of HUNTER'S operation, and bears directly on the reasons that induced HUNTER to abandon not only the old practice inherited from AETIUS, but also the later plans of GUILLEMEAU and ANEL. It showed that weakness alone of the arterial walls would not give rise to aneurism; and this, taken in conjunction with a previous observation, that the dilatation of the vessel is preceded by pathological changes in the coats of the vessel at the seat of the swelling, and for some distance beyond, suggested to HUNTER that "the cause of failure in the common operation arises from tying a diseased artery, which is incapable of union in the time necessary for the separating of the ligature." Consequently, he was led to propose that in popliteal aneurism "the artery should be taken up in the anterior part of the thigh, at some distance from the diseased part, so as to diminish the risk of hæmorrhage, and admit of the artery being more readily secured should any accident happen." A sagacious inference followed, which more clearly differentiates HUNTER'S operation from ANEL'S than any difference in the site of the application of the ligature. When ANEL, in 1710, tied the brachial artery for a *traumatic* aneurism, close to the proximal end of the sac, he purposely left the sac unopened, "not doubting but that the blood contained in it would be dissipated, being at liberty to pass on towards the extremity; that the sac being once empty would not fill again." This supposition, though unattended in that instance by mishap, displayed ignorance alike of the nature of an aneurism, and of the mode of cure, and its fallacy was soon exposed by MOLINELLI, and still later by DESCHAMPS, who demonstrated that ANEL'S operation was uncertain in aneurisms of long standing, in consequence of the difficulty of emptying the sac of the hard concretions that form within it. HUNTER, on the other hand, full of confidence, as SCARPA remarks, in the resources which Nature has reserved to herself in the anastomoses of the vessels of the inferior extremity, and aware of the prodigious efficacy of the absorbent lymphatic system, reasoned somewhat as follows:—"The force of the circulation being taken off by the ligature, the progress of the disease will be

stopped, and if the parts are left to themselves, the sac, with its contents, will become absorbed, and the whole of the tumour will be removed." The correctness of this conjecture has been overwhelmingly established, and the principles which HUNTER once and for all enunciated and demonstrated are now universally triumphant. Indeed, no competent authority among HUNTER'S contemporaries seems to have questioned the originality and the reality of HUNTER'S departure from former modes of practice. The testimony of the Italian surgeon ASSALINI is almost conclusive. In 1781 ASSALINI had seen SPEZZANI tie the femoral artery in the sheath of the triceps muscle preparatory to an intended operation for a popliteal aneurism; in June, 1785, he saw DESAULT in Paris tie the popliteal above a popliteal aneurism, which he did not lay open, according to the plan of ANEL, and in December of the same year he saw JOHN HUNTER at St. George's Hospital for the same disease tie the femoral artery in the canal of the triceps. This last operation was new to him and "excited," he says, "the greatest wonder, and awakened the attention of all the surgeons of Europe." SCARPA, another Italian surgeon, and one of the most learned men of his time, writing in 1804, says, "Mr. JOHN HUNTER was undoubtedly the first who proposed and performed the ligature of the superficial femoral artery in the thigh for the radical cure of the popliteal aneurism, leaving the aneurismal sac untouched."

No unprejudiced writer has ever ventured to deny the independence of HUNTER'S observations and reflections, and till quite recently few have called in question his complete originality. Modern investigations have tended more and more to confirm the early opinions formed of the essential characteristics of HUNTER'S operation. National jealousies have gradually died out as surgical criticism has grown more temperate and enlightened. It has been reserved for bigoted pretenders outside the ranks of the medical profession to raise again the controversial dust of ignorance, misrepresentation, and prejudice. We have shown that so far from the Hunterian operation being unconnected with the results of vivisectional experiment, each of its important steps was taken almost solely by the light borrowed from discoveries made by experiments on living animals, not only in the "cervine" experiment cited by Professor OWEN, but also in the later special investigations undertaken by HUNTER and his brother-in-law, Sir EVERARD HOME, in order to clear up existing doubts as to the primary cause and essential nature of the dilatation of the wall of the artery that occurs in aneurism. We hope to show, next week, that there was needed for the ultimate perfection of the Hunterian method, the crowning discovery based on vivisections by Dr. J. F. D. JONES, of the processes by which divided arteries are closed after division, or puncture, or after the application of a ligature.

THE profession must be weary of the dispute about Homœopathy and the Homœopaths. It is much to be regretted that the whole question cannot be shelved once for all. Unfortunately this is at present impossible. As some misapprehension appears to prevail with regard to a remark we made on this subject in an annotation last week, it may be well, though it should be unnecessary, once again to assert our position in respect to the matter. Exception is taken to our *post-facto* recognition of a certain sort of "wisdom"—the sort of "wisdom" which is essentially worldly and time-serving—in the decision of the Council of the British Medical Association not to eject a member who, as Mr. MACNAMARA'S letter in another column explains, would seem to have become a professed homœopath after admission. Our views on the subject are, we trust, too widely known and clearly understood to be mistaken. Accepting the newest version of homœopathy, these gentlemen select their drugs by a rule-of-thumb which they are pleased to call *Similia similibus curantur*. They do not look for functional or organic "indications" for the recourse to particular modes of treatment. They are simply guided by the similarity of certain effects of drugs to the symptoms of certain diseases; and in choosing like to cure like consists the essence of the method which they dignify with the name of a system and call "Homœopathy," but which we regard as an egregious fallacy in science, and are of course unable to countenance. It would be *quackery* in us to practise homœopathy, whatever it might be in their case; and by making common cause with homœopaths, and admitting them to our meetings, discussing science with them, and, as an inevitable consequence, meeting them in consultation, we should debase our art to the level of quackery, consenting to do that for courtesy or gain which we cannot possibly do with a whole and clear conscience.

All that can be said by way of apology for the course pursued by the Council we have not hesitated to say, perhaps a little too plainly—namely, that it would be making martyrs of the homœopaths to eject them. It would have been honest and commendable of the Association to require the resignation of the member of whom "the PRESIDENT and *several* members of the Branch" complained; but it was worldly "wise" to abstain from doing so. The branch would doubtless have resented the action of the Council, and *might* have rebelled, even going the length of throwing off its allegiance. We do not for one moment suppose such an extreme measure would have been resorted to, but the fear of that calamity, damaging to prestige and perhaps embarrassing financially to the British Medical Association, was before the eyes of the Members of Council, and the result was an ignoble but withal selfishly politic falling back on the argument that as the person who had been admitted was not a homœopath when he was admitted, but had become one subsequently, he had better remain. For the ingenuity of the artifice to escape from an awkward difficulty with a whole skin, the Council of the Association deserves full credit.

Now, however, arises a serious question, and it is one we cannot allow to be evaded. Is the profession to understand that the British Medical Association includes homœopaths? We do not care to ask *how* they are retained—whether it is done in ignorance or in defiance of the rules. The sole question for the profession is, whether the Association is a body which at this time numbers homœopaths among its members, and now we know that it does. This having been officially acknowledged, we take it that all *honest* practitioners of scientific medicine will feel it their duty to withdraw from the connexion. It is perfectly idle to ask or expect individual practitioners to refuse to meet homœopaths if they

are members of the Association. This must be obvious to the most careless thinker. If professors of the school which has for its shibboleth *Similia similibus curantur* are recognised as scientists, it is impossible to decline to recognise them as practitioners, and if they are recognised in these characters, *we must meet them*. There is no logical or practical halting-place between the point at which homœopaths are admitted to the fellowship of medical men in scientific associations and the point at which every obstacle to full fellowship and professional work must be conceded. Let the matter be viewed in this light, and the path of duty will not fail to be clear. The predicament in which the British Medical Association is now placed is one of extreme perplexity, but it is one for which a Branch of it and the Council are responsible, and the great body of the Association has yet to act.

IN selecting Specialism in Medicine as the subject of his address to the students of University College, Dr. REYNOLDS chose one of very great importance. When it is a common experience to hear specialism praised and condemned in the same breath, and the specialist satirised and yet consulted, it must of necessity be well that such apparent paradoxes should be explained to the younger members of the profession. The first difficulty that presents itself is as to the true definition of "specialism." If we take that supplied by Dr. REYNOLDS, and say that specialism "is a morbid condition of the mind—of physician or surgeon, as the case may be—which shows itself in his regarding every patient who comes under his care as a sufferer from the particular disease which he has studied; seeing the symptoms only from the point of view which he has assumed, and made quite clear to himself—and treating them in a manner which no one like himself understands," the definition obviously carries with it condemnation of the system. The term, however, is not so obscure in its meaning that we may not try to hit upon a wider and truer definition than the above. A specialist in medicine is too often a man who has limited and circumscribed his study of disease—that is, one who has worked chiefly, or it may be solely, upon one disease or one group of diseases.

It requires but a very slight acquaintance with the great field of medicine, and its now vast and ever-increasing literature, to recognise the fact that every original worker in it must concentrate his efforts upon some more or less limited portion of the field, and that no one can be fully competent in all its extent as no one can hope to master all that has ever been written on every medical subject. But this by no means implies that a sole devotion to one department of practice, still less of study, is wise or just. Our analogy here must not mislead us. The various well-known divisions of medical science are not independent, but are parts of one great whole, each of which is connected with every other part, and more closely dependent upon the proper working of every other section than we can yet fully explain or, possibly even, realise. And it is this fact that has rendered too great specialisation in medicine so disastrous. It is thus impossible to study completely and with the fullest advantage any disease, however localised it may appear, unless we are able to trace out the way in which it acts upon other parts of the body, and is in its turn reacted upon by them. No doubt the facts observed by even the narrowest "specialists," so far as they are well and accurately observed and recorded, have their value, but at best they are but partial truths—unsafe guides in speculation, and dangerous as indications for treatment. It is not until they have been appropriated by those who by a wider knowledge are able to appreciate them in their due proportion, that they become practically valuable. Paradoxical as it may seem, then, it is nevertheless true, that while every original worker must in some degree specialise his work, the results of that work will be of value only in proportion as he is a generalist and not a specialist. In other words, *Nature knows no specialism*. There is no organ independent of the rest, and the correlation of diseases is such that no one is so individualised as to be even capable of study apart from all others.

It is when we pass from argument to fact that we are able to appreciate best the folly and mischievousness of "specialism" or "specialised practice." Although Dr. REYNOLDS said some hard things about specialists, of their general truth and justness none acquainted with the circumstances can for a moment doubt. It is no exaggeration to speak of some forms of special practice as "organised plunder," and to call the patients "victims."

The whole matter may possibly be briefly stated in some such way as this. Study of disease must be specialised because of the vastness of the subject and the limited capacity of the human intellect. But the direct results of any specialised study of disease are never more than partial truths requiring correction or confirmation from a knowledge of the facts of "general" medicine. It therefore follows that no one should even attempt to study a "specialty" until he has made himself familiar with the general processes of disease, and is in possession of the knowledge concerning the body as a whole that has resulted from the combined labours of many different workers on its several parts. That "special" practice, strictly speaking, is always an evil, for it implies a contradiction of the fact that the body is one and indivisible, and that he who treats any disease, or the diseases of any one part best, is he who combines the broadest and deepest knowledge of other diseases, with an accurate knowledge of the one in question. The public is generally blamed for the growth of "specialism." But the profession is not free from responsibility in this matter; the general body of doctors are, after all, the chief supporters of "specialists," and so it rests with them to check the evil. Without for a moment forgetting the aid sometimes rendered by them, we would close our remarks with an appeal to our fellows to remember that such aid is always dangerous, and that he is the best specialist who can bring the greatest knowledge of "general" disease and its treatment to bear upon any given particular malady.

IT is very gratifying to notice the resumption of its duties by the Royal Commission on Medical Acts before the expiration of October. The months which elapse between now and the opening of Parliament will give it ample time to complete the investigation with which it is charged, and to report on the changes necessary in our examining system. This system may be described as one of numerous boards which compete with each other in giving—not to say selling

—qualifications. There is every variety of such boards—medical or surgical, cheap and easy, or costly and difficult. But the qualifications of all alike are entitled to registration, and carry the right of practice in all parts of Her Majesty's dominions. There is a further variety in the boards. Some are rich and independent, and pride themselves on the excellence of their examinations and the difficulty of passing them. Others are poor, or, if not poor, use their licensing powers as if they depended on the fees of licensed persons; they seem to be anxious mainly to get the money of candidates, and, in order to get this, promise all sorts of pleasant advantages. It is the very scandal of our examining system that the bodies live largely by their examinations, and that there is not a licensing body in either division of the kingdom which does its examining work independent of all money considerations. If the result of the labours of the Commission should be to abolish the competing rivalry of the nineteen boards, and to secure that one shall neither undersell another nor apply a lower test of professional efficiency than a common minimum to be agreed on by an independent central authority, and if it will also create such an authority, the Commissioners will earn the thanks of the profession and of the public. But if the labours of the Commissioners fall short of these results they will be disappointing indeed. It is never to be forgotten that the State has the deepest interest in the preliminary education and professional efficiency of medical men. The efficiency of lawyers is a far less serious question than that of medical men. For one person who needs a lawyer there are a hundred who need a doctor, on whose efficiency their very life at any time may depend. The Boards which test this efficiency should be raised above all suspicion. It is monstrous that to meet the impecuniosity of an examining board or its love of money candidates should be passed into the profession deficient in the knowledge of anatomy or of disease.

We cannot think that such a scandal will long survive the inquiry of a Royal Commission, and we are encouraged in this hope by the promptness with which it resumes its labours, almost before the end of the long vacation. We take this as an indication of earnestness, and earnestness in the work of the Commission is everything. It is difficult to imagine any earnest consideration of the working of the present system of half-diplomas by nineteen bodies, under a weak and interested Medical Council, ending in anything but a great reform, such as is demanded, with singular harmony, by all who have given any attention to the subject.

THE habits of worms and the purpose they fulfil in the economy of Nature do not at first sight appear to be very promising subjects of inquiry, nor likely to lead to interesting results; yet the work which has just been published by Mr. DARWIN, "On the Formation of Vegetable Mould through the Action of Worms,"[1] shows how the facts accumulated by a careful and accomplished observer may render an uninviting subject extremely interesting, and serve as a basis on which theories having an important relation to geology may rest. It is remarkable that, notwithstanding their common occurrence, no monograph of the British species has been written. It is probable, however, that there are about eight species. All of them are probably terrestrial, though they resemble other annelids in being able to live for a considerable period under water. Salt or brackish water proves rapidly fatal to them, as was demonstrated not long ago on the occasion of a high tide overflowing the banks of the Medway at Rochester, when many thousands of worms might be seen lying dead on the surface. Worms are nocturnal in their habits, and only exceptionally leave their burrows by day; those that are found wandering on the surface are, Mr. DARWIN thinks, sick individuals affected by the parasitic larvæ of a fly. They do not, however, bury themselves deeply except in very hot or very cold weather, but lie with their heads near the surface, partly perhaps for warmth, but more probably for respiratory purposes. The senses of worms, with the exception of that of touch, appear to be very feebly developed. Their sensitiveness to light varies remarkably, the sudden admission and shutting off of a bright light concentrated on the head sometimes producing no effect, whilst at others it induces a rapid retreat of the animal into its burrow. Both Mr. DARWIN and HOFMEISTER agree in thinking that light affects worms by its duration as well as its intensity, the light of a candle even causing them to withdraw or preventing them from issuing from their holes at night. They do not appear to possess any sense of hearing, remaining quiet both when a shrill metal whistle and a bassoon were sounded near them. Their faculty of smell, again, seems to be only developed so far as to enable them to distinguish the proximity of the favourite objects of food, for they remained unexcited by many odours, though they soon discovered and carried off fragments of onion and cabbage. Their sensitiveness to contact, on the other hand, is very acute, and the slightest vibration, or even the impression produced by a feeble puff of air, is sufficient to induce rapid movement. They are omnivorous; they like particles of meat and fat, and do not refuse the dead body of another worm. Their digestive fluids are found to resemble the pancreatic juice, and to digest albumen, fats, and starch. Everyone must have been struck with the leaves and petioles of leaves, that are so frequently found standing nearly vertically in the soil. These are probably often thought to be merely accidentally imbedded, but it is well known that they are objects seized by worms and dragged into their burrows, partly for food and partly to close the orifice; the latter object being demonstrated by the fact that small stones are gathered together and similarly placed. Mr. DARWIN'S observations on this point are very interesting. He describes the mode in which they seize such objects, showing that it is partly by the lips and partly by suction, and that they evince a certain amount of intelligence in the mode in which they, if the expression may be allowed, manipulate them, so that they are always dragged to their holes with the least expenditure of force. The mode in which worms form their burrows has engaged Mr. DARWIN'S attention, and he thinks it is partly effected by a wedge-like cleaving process, and partly by swallowing the earth immediately in front of them. They penetrate sometimes to a depth of five or six feet, and there form chambers, where many hibernate, rolled together in a ball. He does not think HENSEN'S estimate of 53,767 worms to an acre too high an estimate, and this

[1] London: John Murray, Albemarle-street.

number would weigh 356 lb., whilst their castings reached the surprising amount in one instance of 7·56 tons per acre, and in another of 16·1 tons per acre—an amount that, considering all this had passed through the bodies of the worms, is sufficient to show how important a part these animals play in the economy of Nature.

SOME of the Indian papers contain an outline of the scheme for the amalgamation of the British and Indian Medical Departments, which has been sent home for the approval of the India Office. It is, for obvious reasons, impossible to say how much reliance can be placed on the information thus furnished. But if the *précis* in the *Bombay Gazette*, which we publish elsewhere, be correct, it amounts to a complete fusion of the two services. The officers of the existing Indian Medical Department will be eligible for general service at home or abroad, but will be allowed the option of restricting their service to India if they so desire. This will be applicable only to the officers now serving, as all future appointments will be to the amalgamated department. It is stated that the officers of both services will be eligible for civil appointments, and that these in future will be held only for five years. It is also stated that the existing Indian officers will have the choice of Indian or British retired pay, and that their selection on this point will not interfere in any way with their claims upon the funds to which they have hitherto subscribed. We have long been of opinion that the course now proposed should have been taken when the old Indian Army was united with the Royal Army, and we are glad to think that such a measure is at last to be adopted. The folly of keeping up a double set of administrative officers had become so manifest that it was recently abolished. The proposed change will do away with the objectionable system of two departments of the public service competing against each other for the most eligible men to be employed on the same duties, and it will remove the antagonistic feeling which has undoubtedly prevailed among the officers of the two departments, when serving together, and when harmonious action was especially necessary to the successful working of an important branch of the army. That the scheme will not give satisfaction to all, that it will evoke strong remonstrances on the part of many men in both departments, may be taken for granted; but that it will work well for the army generally, and for the medical officers, we have no doubt. Care will be requisite on the part of the authorities in preparing the details of the scheme, and due regard must be paid to existing interests, but the welfare of the soldier, the efficiency of the medical service, and the interests of the taxpayers, must be held as superior to the claims, real or fancied, of the individuals affected by the change. The scheme sent home may be materially modified at the India Office, but we trust that the final organisation may be such as will meet with the approval of all who take an interest in the service, and that no undue delay will be allowed to take place in maturing what we trust may prove a lasting and satisfactory arrangement.

MR. A. MACALISTER, Surgeon to Sir Patrick Dun's Hospital, having resigned, the Board of Trinity College has appointed Mr. Ball to the vacancy.

Annotations.

"Ne quid nimis."

FILARIA SANGUINIS HOMINIS.

THE members of the Pathological Society on Tuesday last enjoyed the rare opportunity (in this country) of seeing the filaria sanguinis hominis in the living state from a patient in the London Hospital suffering from hæmato-chyluria, under the care of Dr. Stephen Mackenzie. They were also enabled to hear from Drs. Cobbold and Vandyke Carter the facts at present known concerning filarious disease, whilst the observations related by Dr. Mackenzie, most patiently and carefully pursued for two months upon the case in question, were a valuable addition to these facts. In one important point these observations have resulted in a further discovery, to which we shall refer again. Our present purpose will be simply to gather up briefly the facts as detailed by these speakers, and to indicate their bearings upon the pathology of the obscure affections of the lymphatic system with which they are connected. In the first place we have now—thanks to the discoveries of Bancroft, Lewis, and Manson—a complete knowledge of the life-history of the parasite. Like so many similar creatures, it presents us with an example of alternation of generations; or more correctly speaking, of the need of two hosts for its full development. The minute almost structureless worms found in the blood of the human subject in such vast numbers are the *embryonic* forms of the filaria which requires the mosquito in which to develop into the sexually mature worm. The mosquito feeding on the blood at night, when the filariæ are generally alone to be found, becomes gorged with them. Their growth in the mosquito has been traced by Lewis and Manson, and it is presumed that they are only liberated from the body of their host by its death in the water to which it always finally resorts. The nematoid is thus set free, and possibly undergoes further development; for the mature worm measures some three inches in length. Its passage into the human body is easily explained; and the analogy in this respect with the larger nematoid—the guinea-worm—is one which Dr. Vandyke Carter ably illustrated. Once within the human body, the worm lodges in the tissues, but as to its migrations, and, indeed, its ultimate resting-place, but little is known. It would seem, from its discovery in a lymphatic abscess by Bancroft, and in a lymph scrotum by Lewis, to have a peculiar aptitude for selecting the lymph channels for its habitat; a selective power not more remarkable than that which urges the trichina to lodge in muscular tissue. This is further borne out by the fact that its embryos—the filaria sanguinis hominis—are met with in the blood and the urine of the subjects of chyluria and nævoid (or lymphatic) elephantiasis.

Now, although the various discoveries which have been made—at the expense of so much patient research and at such various times that, as Dr. Cobbold remarked at the meeting, they form each distinct "epochs"—have enabled us to form the above complete sketch of the life-history of the parasite, there are lacunæ still to be filled up. Thus knowledge is wanted upon the growth and migration of the parent worm after it has gained entrance into the human body, also as to its duration of life, and particularly as to the question whether it can take on the power of asexual reproduction, and if so, for how long a time. The myriads of filariæ that are probably daily reproduced in the body of such a patient as that under Dr. Mackenzie's care seem to demand such a fact as alternate generations, and also to raise the question as to the time during which the process of reproduction can continue. There is no reason to believe that the embryonic filariæ in the blood can undergo further development within the human body; indeed, analogy, as well as

the remarkable discovery of an intermediate host in the mosquito, are opposed to this notion. Again, filariæ have been found in the blood apart from chyluria or any outward manifestation of lymphatic derangement; but this is explicable if it be admitted that the adult worms may lodge in other parts of the body in communication with bloodvessels alone. Conversely, chyluria may exist without filaria, and the case mentioned by Dr. Mackenzie, where the parasite was found in the man's blood in India, but could not be found when he came to England, is explicable on the view that though the parent organism might have perished, or yielded no more embryos, yet the change excited by its presence in the lymphatic channels, and therefore the chyluria, might still have persisted.

The precise mechanism of chyluria still requires to be explained, and until it is elucidated an important part of the subject will remain obscure. The question of the pathology of chyluria was, however, barely touched upon on Tuesday, Dr. Mackenzie limiting himself to the statement of the facts observed in his case; the most important in connexion with the urine being that besides having all the chylous characters, it invariably contained more or less blood,—that passed by day containing more blood and filaria, that passed by night being more milky; and that filariæ were found in it, especially in connexion with blood coagula. The most remarkable feature of the whole case lay in the periodicity shown by the filariæ in their time of appearance in the blood. During the whole period of the man's stay in hospital his blood had been examined regularly every three hours, with the constant result that, by night, the filariæ abounded and by day were entirely absent. From 9 A.M. to 9 P.M. they were absent; they appeared at the latter hour and increased up to midnight, then decreased till at the first-named hour none were found. These observations entirely confirmed those of Manson, and particular stress was laid upon their nocturnal wanderings and the habits of the mosquito. It is certainly singular that the time selected by the mosquito should coincide with the presence of the parasite in the blood stream, and the connexion of these two facts is not the least wonderful chapter in the life-history of the parasite. But whatever the explanation of the periodicity — Dr. Vandyke Carter pointed out that it was not invariable, — a valuable addition to our knowledge of it has been made by Dr. Mackenzie. He found that whereas the time of ingestion of food bears no relation to it, it is otherwise with the time of rest and sleep, for when the patient was up during the night and slept during the day the period of filarial migration was similarly inverted. Dr. Mackenzie did not venture to speculate upon these curious points. He wisely contended himself with laying the facts he had observed before the Pathological Society; and we may congratulate the Society upon having had the advantage of this valuable demonstration upon a class of diseases seldom met with in this country, it is true, but the study of which may throw light upon other obscure affections, and enlarge our conceptions not only of the manner in which parasites may infest the human organism, but of the remote effects their presence is capable of producing.

THE LATE PRESIDENT GARFIELD.

WE have received an early copy of the official record of the autopsy of General Garfield from the *American Journal of the Medical Sciences*. This record is very detailed, but as it for the most part merely amplifies the shorter account published in all the daily papers, and previously commented on by us, it will suffice now to mention the two or three new facts which may be gathered from it. In addition to the wounds in the back inflicted by the bullet and the surgeon's knife, "an oval excavated ulcer, about an inch long, the result of a small carbuncle, was seated over the spinous process of the tenth dorsal vertebra. Over the sacrum there were four small bedsores, the largest about half an inch in diameter." The full account of the abscess between the liver and the colon makes it extremely probable, if not certain, that this abscess was originally connected with the liver, as the liver substance was bared of its capsule. The spleen was "large, weighing eighteen ounces, of a very dark, lake-red colour, both on the surface and on section." Its parenchyma was soft and flabby. The source of the fatal hæmorrhage was found to be a rent, nearly four-tenths of an inch long, in the main trunk of the splenic artery, two inches and a half to the left of the cœliac axis. "This rent must have occurred at least several days before death, since the everted edges in the slit in the vessel were united by firm adhesions to the surrounding connective tissue, thus forming an almost continuous wall bounding the adjoining portion of the blood-clot. Moreover, the peripheral portion of the clot in this vicinity was disposed in pretty firm concentric layers." Nearly a pint of clotted blood, with more than a pint of bloody fluid, was removed from the peritoneal cavity. The mass of blood behind the peritoneum was nearly as large as a man's fist, and another mass of coagulated blood, "about the size of a walnut, was found in the greater omentum, near the splenic extremity of the stomach. The communication, if any, between this and the larger hæmorrhagic mass, could not be made out." There were hypostatic congestion and broncho-pneumonia in the lower lobe of each lung, more extensive on the right side. "In the lateral part of the lower lobe of the left lung, and about an inch from its pleural surface, there was a group of four minute areas of grey hepatisation, each about one-eighth of an inch in diameter." We have already commented so fully on this case, that we must content ourselves now with pointing out that the condition of the spleen was typical of septic poisoning. The description of the seat and course of the hæmorrhage does not throw much light on its actual cause, and we should have been glad if this could have been traced out more clearly. The report leaves it an open question whether the rent in the artery was the result of ulceration spreading from a pouch in the wound, or of bruising of the artery by the bullet, and subsequent formation of a false aneurism. From the description given, it is clear that the hæmorrhage behind the peritoneal cavity did not occur immediately before death; it was the rupture into the peritoneum that proved fatal. Both lungs were seriously affected, and possibly the spots of "grey hepatisation" in the left lung were commencing abscesses. From a clinical account of the case, by Dr. Hamilton, published in the *New York Medical Gazette*, we learn that signs of bronchitis manifested themselves before leaving Washington. We must express our astonishment and regret that this fact was not mentioned in the official bulletins until several days later, and that the carbuncle and bedsores found no place there at all. With this exception, Dr. Hamilton's narrative contains nothing that our readers were not fully acquainted with during the course of the illness.

TABETIC ARTHROPATHY.

IT is now thirteen years since M. Charcot first drew attention to the destructive and painless joint affection that occasionally occurs in the subjects of locomotor ataxy, and nearly ten years since the appearance of those admirable lectures in which he discussed the pathogeny of this and allied forms of arthritis in other diseases of the cerebro-spinal axis. He regarded this tabetic arthropathy as essentially a disorder of nutrition from the involvement in the morbid process of the anterior grey cornua of the spinal cord, and considered that their occurrence showed that the cells in this region governed the nutrition of joints as well as of muscles. His early observations were received with incredulity, but time

has proved their exactitude. In France especially, contributions have not been lacking, not only to the special subject of joint affection in tabes dorsalis, but to the intercurrent joint diseases met with occasionally in cerebral disease and in myelitis. In this country the recognition of such joint affections, or rather, we should say, their correct interpretation, has been much more gradual, and although a few isolated cases have been, from time to time, recorded since M. Charcot's views have been more widely known, it was not until Mr. Hutchinson discussed the subject at the Royal College of Surgeons two years ago, and Dr. Buzzard at the Pathological Society last year, that these cases have been fully recognised. At the last meeting of the Clinical Society a well-marked example was shown by Mr. Keetley, where both hip-joints were involved in the destructive process, and his candid avowal of ignorance of the existence of such an affection when it first came under his notice, although its characters had at the time seemed to him very anomalous, will serve to explain, in great measure, the fact of its being overlooked in past years. Still, physicians will hardly be disposed to admit the truth of his surmise that this non-recognition is to be laid at their door. They might point to the fact that most examples have been related by surgeons to whom the patients had first presented themselves. There is nothing, however, peculiar in this non-recognition of the disease. No one doubts that tabes dorsalis existed long before the time of Todd and Duchenne, and the occurrence of tabetic joint affection is no new thing. The doctrine of the influence of the nervous system upon tissue-nutrition is comparatively modern, and there is much yet to be learnt about it; but now that it is generally admitted various phenomena are receiving new and more rational explanation. Besides, there are few fields that are less exhausted in pathology than that of diseases of the joints, especially in regard to their etiology—witness "rheumatical arthritis" and "rheumatism." To return to tabetic arthropathy or Charcot's joint disease. The original interpretation given by M. Charcot, that it depended on the extension of the lesion in the posterior columns to the anterior cornual cells, although confirmed by many observers, is now held to be insufficient, and cases have been recorded where no alteration of the grey matter has been observed. It is believed that the cases in which the cornua are affected are also marked by muscular wasting, the relation between these cells and muscular nutrition being now a well-established fact. Dr. Buzzard has been foremost in disputing the view that the occurrence of the joint affection depends on a spinal lesion, and he has substituted a hypothetical explanation, which has, we believe, not yet received the confirmation of post-mortem proof. Having noticed in ataxics a preponderance of cases of arthropathy associated with the "gastric crises," he suggested that such an alliance pointed to involvement of the medulla in the vicinity of the vagus nucleus as being the cause of the joint affection. And, further, if there be such a medullary centre governing the nutrition of joints, he thinks we might have from its disturbance an adequate explanation of the association of cardiac and articular lesions in acute rheumatism. Until there be some more stable ground for the minor premiss, pathologists will be naturally disinclined to accept the major, which would lead to a conclusion as to nerve-influence and localisation that would considerably enlarge the limits (now of no mean extent) of these modern doctrines. Meanwhile observations as to tabetic joint affections will, we hope, be multiplied, and knowledge be gained upon the process in the joints as well as on its relation to the changes in the nervous system. Mr. Keetley's communication on the subject has an especial interest, for it is literally one of the first fruits of the Congress; it was at its museum that he was brought in contact with cases of the disease and preparations which threw light upon the real nature of his patient's puzzling condition.

"JIBBING HORSES."

"A COUNTRY F.S.A.," writing to *The Times* on the above subject, propounds as new a theory that jibbing is the result of "a temporary mental state," and that "the object in view should be to divert the small mind of the horse from its one prevailing idea." The writer proceeds to suggest methods of diversion which will be diverting to the readers if not to the horse. For example, he recommends the drivers of "jibbing horses" to be provided with a small bottle of something that a horse abhors, and which stings or irritates; by placing a small portion on the tongue of the horse, all its thought is directed to clean its mouth, and every other consideration is entirely gone from its mind. We are incontinently reminded of the storied way of catching birds by sprinkling salt on their tails. No doubt the remedy would be successful. Meanwhile, there is nothing whatever new in the notion of jibbing being a mental vice; so is shying, and so are certain forms of crib-biting. That horses have temper, and may become either "moodish" or "modish," temporarily or permanently, "nervously" or savagely insane, has been known to all students of comparative psychology, and to most "vets," for a great length of time. Rarey recalled public attention to the matter a few years ago, and it was then clearly recognised by all intelligent horse-trainers. Still better than the expedient recommended is to blow or whisper in the ear of a horse on the side opposite to that on which he inclines to kick; it is useless on the same side. If he either likes or dislikes the sensation enough to have his mind changed he will go on. Nothing, however, can succeed in a case of *genuine* "jibbing" except it overcomes and cures the ill-temper. In nine cases out of ten the jibbing is not genuine. The horse stops because the harness hurts him somewhere, and he is sulkily resolved not to proceed until the grievance is redressed. When there is no grievance, the horse is like a perverse child; and "giving him something he does not like" is a form of punishment which diverts his small mind, just as the small mind of a child is diverted by a good whipping. We do not advocate whipping; but neither can we recommend coaxing. The best plan is to look for a cause of irritation, and to change the mind state, as we have indicated.

THE CHAIR OF PATHOLOGICAL ANATOMY AT VIENNA.

THE question of the appointment of a Professor to fill the chair of Rokitan-ky has become a burning one. It now appears that neither of the illustrious names mentioned by us a fortnight ago has been selected by the Professoriat in their recommendation to the Ministry, with whom the actual appointment rests. Such an oversight is, to say the least, surprising, for neither of the nominees of the Collegium, Drs. Arnold and Kundrat, has attained to anything like the reputation of a Cohnheim or a Klebs. It is consolatory to learn for the credit of the Vienna school, however much one may regret the necessity, that the Ministry has hesitated to accept either nomination, so that the appointment is still in abeyance; and it is quite likely that it may be made in disregard of the Collegium, whose action has excited the remonstrance of those best qualified to criticise it. From all we can gather, the claims of Professor Klebs of Prague stand foremost, and his appointment would do much to maintain the high reputation of the chair. It is possible, however, that its duties may be lightened by the creation of the office of prosector, for which Dr. Chiari or Dr. Kundrat might be selected.

ANNUAL REPORT OF THE REGISTRAR-GENERAL OF SCOTLAND.

THE Registrar-General of Scotland has just issued his twenty-third detailed annual report, not dealing, however, with more recent facts than those for the year 1877. It is pointed out, apparently as some extenuation of this unfortunate delay, that on April 18th, 1878, the Registrar-General issued a "general abstract of the births, deaths, and marriages registered in Scotland during the year 1877, along with the usual explanation and commentary." Without, however, attempting to disparage this general abstract, which is especially valuable because it is issued so promptly after the close of each year, we are scarcely able to recognise any sufficient reason for the delay of the detailed report until more than two years after the publication of the corresponding English report for the same year. It is scarcely necessary to point out how heavily the value of such statistics is discounted through their tardy publication, and a comparison of the two reports for England and Wales and for Scotland, only confirms the impression that what is possible with the English report cannot be impossible in Scotland. It is time some measures were taken to pull up these arrears, in order that the Scotch reports might be published, as nearly as may be, simultaneously with those for England. The new Registrar-General for Scotland announces in his short preliminary remarks that, in the report just issued, Dr. Farr's classification and nomenclature, long used in the English reports, have been for the first time adopted in the abstracts and tables of causes of death. It is somewhat unfortunate that this long-delayed attempt at uniformity of classification between the English and Scotch reports should have been made just when we believe the Registrar-General of England has decided to make some considerable alterations in Dr. Farr's classification, in order to make it agree as nearly as possible with the nomenclature issued by the College of Physicians. Even this tardy attempt to render the statistics of fatal diseases in Scotland uniform with those published for a long series of years in the English reports appears to have been made unwillingly; and it is stated that the substitution of Dr. Farr's nomenclature for that previously in use, if carried out in its entirety, would have caused an increase of space devoted to the tables dealing with this branch of vital statistics from 186 to 438 pages. As it is, the tables devoted to *persons*, which were very acceptable in former Scotch reports, have been sacrificed in order, it is said, to adopt Dr. Farr's nomenclature; and yet the 186 pages formerly devoted to these tables have increased to 292! It must be patent to anyone who critically compares the Scotch report for 1877 with the English report for 1879 (the last that have been published for each country), that there was not the slightest necessity for the vast and marked increase in the pages of tables devoted to causes of death in the Scotch report just issued. The complete statistics which the Scotch reports have invariably contained relating to the eight principal Scotch towns have been among the best features of these reports; but the devotion of 129 pages to such statistics of a single year is certainly a most unnecessary waste of space. All that is really valuable in these tables might easily, and far more usefully, have been put into less than twenty pages. Moreover, with all this lavish devotion of space to the disease tables, there are not, so far as we can see, any summary tables showing the fatality of the various diseases during a series of years. Such summary tables are indispensable in all reports on vital statistics, as the figures for a single year standing alone cannot be appreciated at their true value. In this respect the reports for Scotland are far inferior to those for England. Without falling into the error of such prolixity, it would be very desirable that the English reports should in future give more detailed and precise statistical information relating to the largest English towns. The information now given in the English reports for the twenty largest towns is much wanting in precision and detail.

HÆMATOLOGY.

SOME facts recently published by Bizzozero and Salvioli on blood-formation deserve notice. They have endeavoured to stimulate the hæmatogenic function of the spleen by copious venesection, and succeeded in the case of dogs and guinea-pigs, but failed in that of rabbits. This variation in the result, when different animals are employed, explains the failure of the method in the hands of Neumann and Freyer. The spleen of animals thus treated is swollen, soft, light red in colour, and presents, on microscopical examination, the early forms of red corpuscles, which are seen also in the spleen of embryos—cells with large nuclei, and coloured protoplasm, with various intermediate forms between these and perfect red corpuscles. In the blood of the splenic vein there were constantly found large, pale-red blood-corpuscles, and the nucleated forms were also met with in the course of the circulation. Tested by colour standards, the blood of the splenic vein showed more hæmoglobin than that of the splenic artery, and, on numeration, it was found to contain a large excess of white blood-corpuscles, which were increased absolutely, as well as in proportion to the red. The experimenters therefore conclude, in opposition to Neumann and Freyer, that both red and white corpuscles are formed in the spleen. In some animals, after venesection, the hæmoglobin returned to the normal almost as quickly if the spleen had been previously excised as under normal conditions. The explanation of this is uncertain. In another investigation they endeavoured to ascertain the course of the changes in the hæmoglobin after loss of blood. The fall in colour progressed, sometimes for a few hours only, sometimes for two days, and then gradually returned to the normal. For each amount of blood which corresponded to 1 per cent. of the body weight of the animal, the hæmoglobin fell 11·14 per cent. of the original quantity. They account for the fall in tint, as other authors have done, by assuming a movement of plasmatic fluid from the tissues into the bloodvessels to raise the lessened volume of the blood up to the normal.

QUEEN'S UNIVERSITY IN IRELAND.

THE last meeting of the Senate of the Queen's University to confer degrees was held in Dublin Castle on the 13th inst. The Chancellor of the University, His Grace the Duke of Leinster, who presided, stated that that day closed the thirty-second academic year of the University. During the present year, of 849 students of the University, 602, or about 70 per cent., satisfied the very strict requirements of their examiners. In the Faculty of Medicine at the two University examinations and the degree examinations, 532 students and two external candidates presented themselves, and of these 72 passed for the degree of doctor in medicine, 53 for that of master in surgery, 34 for the diploma in midwifery, and 286 at one or other of the two previous examinations. The Queen's University during the past thirty-two years has educated 7800 students, of whom 2261 have received its degrees. A peculiar feature of the proceedings was the conferring of honorary degrees on those graduates of the University who had distinguished themselves in various ways. Among those thus honoured may be mentioned the name of Dr. Cleland, a Fellow of the Royal Society, now one of the distinguished professors of the University of Glasgow, but who formerly for many years occupied the chair of anatomy and physiology in one of the Queen's Colleges.

THE PROGRESS OF MEDICINE.

THE meeting of the International Congress has afforded to a writer in the current number of the *Westminster Review* the opportunity of commenting on the progress of medicine in recent years. Referring to the empiricism of medicine in all ages, and the fact that theories have been propounded, generally accepted, and later on again discarded for others, which in their turn met the same fate, whilst old theories long buried in forgetfulness are from time to time restored in modern form, and win new credence, the reviewer very justly points out that these theories have all contained a germ of truth which has led to their acceptance, and that their subsequent replacement by others has been because this germ of truth has been mistaken for all truth. Medicine, however, is not alone empirical; though not strictly a science in itself, as Dr. Poore recently pointed out, it yet rests upon several sciences, and is truly scientific in its processes and results. A large part of the article in question is devoted to show the growth by and in scientific method during the last generation. In particular the dependence of medicine upon the science of biology is laid stress upon, and as this latter has but recently established itself as a science, scientific medicine may still be held to be only in its infancy. The tendency of pathology, on which scientific medicine is based, having for some time been analytical, even to the point of losing sight of the disease altogether, has now shown a tendency to become more constructive, and many diseases in different organs are shown to be the outcome of certain general pathological changes differing in their effects, according to the function of the organ attacked; especially has this been the case with inflammation. The recent advance in diagnosis, particularly due to the use of instruments of precision and the application of reflected light and electricity, with therapeutical advances too, comes in for its share of notice and commendation. The reviewer also illustrates the way in which of late years medicine has utilised the progress in science, physical, chemical, and biological, and has converted it to her own purposes. Indeed, he has most ably shown that the claim of medicine to be considered truly scientific is not unfounded, and that its progress in recent times is but the first-fruits of a harvest that promises to be gathered in not slowly, and the value of which to individuals and to the race will be incalculable. He has, however, in referring to the activity of modern surgeons in the treatment of abdominal diseases a little exaggerated when he speaks of the successful removal of the pancreas having been accomplished, and it is to be hoped that none of his professional readers may by the statement be stimulated to attempt to convert his forecast into an accomplished fact.

THE ART AND MYSTERY OF "BONE-SETTING."

THE only mystery about that vaunted success of bone-setters lies in their boldness, an audacity bred of ignorance. Knowing nothing of the risks attending the violent jerking of dislocated limbs back into their sockets with the tearing away of adhesions and the rupture of tissues, they apply force in a degree and with a directness which few scientific surgeons would dare to employ. In a considerable proportion of cases no evil consequences may ensue, and the violence of the unskilled is rewarded. It is, however, scarcely fair to call these persons unskilled. There is a rude art about their proceedings. It consists in acquiring by manipulative investigation a knowledge of the way joints work under natural conditions, and by inference how they may be put out of gear. In this rough knowledge, which is of a sort with that which the able-bodied seaman possesses in regard to the ropes, sails, and rigging of his ship, the successful bone-setter is generally expert. He knows no more of the vital mechanism of the human body than the sailor knows of navigation; and though he may be able to haul and jerk, he cannot either know what he does or determine when and how force may be safely applied or would prove dangerous. It is strange that the intelligent community should trust their limbs—and lives—to bone-setters. Nothing but blindness to the ignorance of those they employ can explain the fact that they frequently do so. It is desirable that the facts with regard to the sort of success bone-setters sometimes achieve should be clearly understood. It is the success of the man who by a lucky jerk of the wrist may chance to pull out a tooth which a skilled dentist would scarcely dare to attempt to draw. That blacksmiths can and do extract teeth, and bone-setters can and do reduce dislocations which surgeons have not had the hardihood to tear away from their false positions and force back into their sockets, no one can deny; but that these feats are accomplished by dint of a daring which comes of ignorance should be generally understood.

THE WHISTLING OF WASTE PIPES.

IT is possible that the "whistling" of waste pipes by which the steam is blown off at factories, may be a nuisance as alleged before the Whitechapel District Board of Works; but the whistling of ordinary steam whistles is far worse. As a matter of fact the escape of waste steam generally makes a dismal or maddening roar, like that so often heard on the piers of seaside watering-places. This is a dire infliction; but, as we have said, the ordinary whistling is worse. Anyone living within earshot of a railway station or large factory must be disagreeably familiar with the hideous and distracting sound of these whistlings, sometimes shrill, sometimes low-toned and agonising in their intensity. Surely it would be possible to work the "shunting" business of a railway station and to give all necessary signals in a factory without one-tenth part the noise now made, ostensibly with a view to the safe or easy conduct of these operations. At some of the terminal stations the engine-drivers might be supposed to indulge in a sort of sport, consisting in blowing their whistles against each other in competitive trials of strength and fearsome noisiness. As these performances are numerous during the late hours of the night, and begin exceedingly early in the morning, invalids and easily disturbed sleepers have little rest, and the results to health are not unfrequently serious. Can nothing be done to mitigate the nuisance?

HYDROPHOBIA.

MR. CHARLES HARVEY, a spirit merchant at Penzance, has died from hydrophobia. He was bitten on the hand three months ago by a retriever. The dog had been bitten three months before by a small rabid dog. Mr. Harvey's wound was cauterised; how soon after the infliction of the bite does not appear in the published accounts of the case. On Monday week last he experienced pains and stiffness, which were attributed to cold, but on Wednesday he became unable to swallow liquids, and on Thursday he died. The case shows the great importance of destroying every dog which has been bitten by another known or suspected to be suffering from rabies. It is only thus that serious outbreaks can be prevented.

The daily press, a few days ago, described a struggle between a policeman and a ferocious dog in the yard of a police-station at Shadwell. There is no evidence, we believe, that the dog was rabid, but the occurrence has brought on the police constable a flood of suggestions to prevent him from being attacked with hydrophobia. A clergyman gives him the advice, spirituous rather than spiritual, to get drunk upon whisky—a proceeding which, in conjunction with a hot bath, "will certainly cure the bite of a dog, whether mad or not." Another less disinterested individual offers an infallible specific at a guinea a bottle. A

lady advises the treatment which was effectual in the case of a lady friend; the sufferer's husband took her into a hall, locked the doors, and with a whip compelled her to run round the hall until she fell exhausted. Another consoler assures the policeman that he will lose his life unless he takes Turkish baths. A gentleman sends a specific which has been in his family for three hundred years, although what precise effect it has had in his family he fails to say. The case of the policeman is certainly admirably suited for the use of these remedies, for, being in no danger, as we trust, of hydrophobia, no remedy suggested can fail to preserve him from the disease.

THE ROYAL INFIRMARY, MANCHESTER.

THE Board of Management of the Manchester Royal Infirmary have published a special report on the present financial position of that institution, which is scarcely creditable to the wealthy city and district of which the infirmary is the principal medical charity. The report shows that the managers of the infirmary have had to withdraw from capital, to meet current expenses, since June, 1876, no less than £59,972; that the income had fallen from £24,253 in 1877 to £19,841 in 1881; and that for several years the expenditure had largely exceeded the income, the excess last year being upwards of £8000. Under these circumstances, the board say, unless the annual receipts be increased by £7000 or £8000, "it will be absolutely necessary to partially close the infirmary and the convalescent hospital." It has been determined, therefore, to make a special appeal to the public in aid of the funds of the institution, and we cannot permit ourselves to believe that the appeal will be unsuccessful. It will not have been forgotten by our readers that the sanitary condition of this infirmary a few years ago formed a subject for official investigation. Defects in the sanitary arrangements of the building were then disclosed which called for immediate remedy. It would appear that the alterations needed have entailed a cost upon the infirmary funds of £23,000. At the time when the alterations were entered upon, doubts were entertained by not a few persons as to the wisdom of vamping up an old building. It would seem, however, that the alterations have so far been justified in the result. A minute of the medical board of the infirmary, signed by Mr. Lund, is appended to the report of the board of management, in which it is stated broadly "that whilst [before the alterations] erysipelas, surgical fever, and pyæmia were rife among the patients at frequently recurring periods, the occurrence of a case of any of these diseases is now comparatively rare."

HEALTH OF THE FRENCH ARMY.

ALARMING reports having been circulated respecting the health of the French army in Africa, the Bureau d'Hygiène has, under the direction of the Minister of War, drawn up and issued a comparative statement showing the rate of sickness and mortality prevailing among the troops serving respectively in France, Tunis, and Algeria during the ten days from Sept. 5th to the 15th. The proportion of sickness per 1000 of the troops, which was 45·0 in France, did not exceed 49·7 in Tunis, and 45·4 in Algeria. The notices of this report which have reached this country, as regards the mortality, are not so intelligible. It may fairly be presumed that the sickness rates for the ten days represent the mean number of men incapacitated by sickness in the three different portions of the army during the ten days; but in the mortality returns, in order to estimate their import, it is necessary to know whether the rates are simply the proportions of the deaths to the troops, or the *annual* rates, which the deaths in the ten days imply. Now the mean rate of mortality among the troops in France during the ten days is given as 0·62 per 1000, which certainly seems too low for an annual rate; and yet if the figures be simply the proportion of the deaths in the ten days to the troops under observation, the proportion in the two periods of five days becomes 1·23 per 1000, which implies an annual rate of 44·9 per 1000, and would be an unaccountably high rate for the army at home. However, it must be borne in mind that the period of observation (ten days) is too short for trustworthy deductions. It is worth noting, moreover, that whatever the import of the figures, the observed mortality rate in the Tunis army was not more than twice that prevailing in the home army, while the rate in the Algerian army was lower than that in the army at home.

EXEMPTION OF DENTISTS FROM THE DUTIES OF CITIZENSHIP.

A "LICENTIATE in Dental Surgery" recently asked whether he could claim exemption from serving on juries. We assumed the question addressed to us to be substantially whether he could claim as a "licentiate" of the College, and we informed him that he could not do so. It, however, remains that, under the Dentists Act, any registered person, whether he be the village blacksmith or a chemist and druggist, can claim immunity from the obligation of citizenship. The knowledge of this fact possibly had some influence with the multitude of those who got their names placed on the list immediately after the passing of the Act. It was worth while for any tradesman to profess to have been a hewer or drawer of teeth in order to obtain this privilege. When opportunity offers it will be well to ask Parliament to consider whether it is right or consistent with the obligations of good citizenship to allow the promotors of Acts of Parliament to introduce these exemption clauses into Bills with the view of rendering them popular. It seems monstrous that an exceptional privilege, originally intended for the public good, by preventing the possibility of a practitioner of medicine being interrupted in his daily duty of ministering to the safety of human life, should be converted into a complimentary boon to be conferred on anyone and everyone who joins a class over which the Legislature has deigned to cast its protection. Hitherto only men who have passed through the necessary curriculum for a medical or surgical qualification—thus devoting a large portion of their time and money to the study of a profession—have been exempted. Now any man who can register as a dentist is so privileged. Thus the immunity originally intended for the public good has become a boon conferred on registration. This section of the Dentists Act must certainly be repealed; but of the Act as a whole we say "Reform it altogether."

GYMNASTICS AND GYMNASIA.

SOME able lecturer should discourse on the use and abuse of gymnastics and gymnasia. Feats of strength are worse than useless as exercises for the body performed in the interests of health, unless they are so wisely planned and carried into effect as to fulfil the conditions of muscle and nerve culture. A mere output of brute force implies little or nothing as regards the integrity of body functions. A man can do, or may soon acquire the power of doing, many things which it is not in the least degree desirable he should do. It would be well if before resorting to gymnasia, or engaging in the sports and exercises carried on in these establishments, even the seemingly healthy would ask their ordinary medical attendants to examine their hearts and lungs, and give precise directions as to what may or what shall not be attempted by them. Cases are of too frequent occurrence in which serious physical mischief is done in the pursuit of health, because those who "feel well" and "look well" resort to unadvised

exercises. "Looking" and "seeming" are very uncertain indications of the state of health. The apparently robust are not uncommonly subjects of great weakness, and those who seem in rude health may be the victims of grave and even what is called "incurable" disease, though it is well to regard all maladies as amenable to some treatment, albeit it may be difficult to determine the precise form of remedy most likely to prove successful. The best policy is to avoid putting any part of the system to exceptional uses, or subjecting it to unusual stress of energy without taking the obvious precaution of first ascertaining how far the actual state of the organism is likely to justify the test of strength and stand the strain.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

THIS Society has at last, under the presidency of Mr. Thomas A. Rogers, passed the following by-law: "That on and after Nov. 1st, 1882, candidates for the resident, non-resident, or corresponding membership of the Society shall not be eligible unless they practise as dental surgeons or are interested in the progress of dental surgery, *and are also* licentiates in dental surgery, or qualified practitioners of medicine or surgery; or possess such a diploma or degree as in the opinion of the Council will qualify them for membership of the Society." Is this to be looked upon as a step towards the adoption of the principle so firmly and loyally asserted by the Association of Surgeons practising Dentistry? Obviously that is the *only* principle which the medical profession can recognise. We cannot regard qualifications which do not imply membership of the medical profession as giving a title to recognition. It is with no ill feeling to the members of the Odontological Society we adhere to our resolution that as a society admitting unqualified persons to its membership, we are unable to acknowledge it as a medical body. If the Odontological Society will require a medical or surgical qualification of its members, we shall be sincerely glad to welcome it as a professional association.

PROFESSOR VIRCHOW.

THE arrangements for the festival in honour of the twenty-fifth anniversary of Virchow's appointment as Professor to the University of Berlin—an anniversary which coincides with his sixtieth birthday—are now being made. An influential committee, comprising the names of Prof. Bastian, Director of the Royal Ethnological Museum, Town-Councillor Friedel, Prof. Küster, Dr. Voss, Herr Ritter, &c., have asked permission of the Town Council to grant the use of the large hall in the Rathhaus and to defray the cost of the decorations, as on the occasion of the banquet to Dr. Schliemann. The 19th of November has been fixed for this festival. The most interesting part of the proceedings will be the handing over to Prof. Virchow the title-deeds of a new institution to be devoted to the prosecution of scientific researches especially relating to anthropology, of which he will have the full control. As a politician, an anthropologist, and an antiquarian, no less than as a pathologist, Prof. Virchow has claims not on Germany alone, but on the whole of civilised humanity; and we heartily join in the desire to do him honour.

DISORDERLY INQUESTS.

IT is impossible to avoid a feeling of sympathy with any demand made by a coroner's jury for "additional evidence." The evidence brought under the notice of a court of this class is for the most part not merely meagre, but selected by the coroner's officer, a functionary to whose judgment of expediency jurors may well hesitate to submit themselves. At the same time it is desirable, as the Deputy-coroner for Eastern Middlesex recently protested, that the coroner's court should not be "turned into a criminal court." When medical evidence is forthcoming, to the effect that the death of a deceased person has not been caused by violence, it is absurd, and would be wrong to permit an unseemly wrangle between unskilled jurors or witnesses who entertain a contrary opinion and the medical witness who has examined the body. If any scientific doubt exists, it is the duty of the medical man to inform the coroner, and take measures for further inquiry. If no scientific doubt exists, then, so far as the coroner's inquiry as to "the cause of death" is concerned, there is an end of the case. Any doubt entertained by unskilled persons, and resting on a presumption arising out of the general facts of the case, should be communicated to the police and investigated elsewhere. We cannot too often or too strongly insist that the coroner's court is a court of inquiry as to "the cause of death"—nothing more.

MICROMETRIC RESEARCHES ON CONTRACTED MUSCLE.

IN a memoir recently published in Pflüger's *Archiv*, M. Engelmann gives the results of his investigations on the relative thickness of the isotropal and anisotropal layers of muscular tissue in the contracted and in the uncontracted state. He selects the muscles of insects, and fixes them in different grades of contraction by the action of alcohol, osmic or salicylic acids. He finds that in contraction the volume of the isotropal layer diminishes, whilst the anisotropal augments continuously. When at rest the thickness of the isotropal layer is to the anisotropal as 5 to 4, but in contraction the anisotropal layer becomes twice as great as the isotropal, and the increase appears to correspond to the degree of shortening. Engelmann regards the essence of muscular contraction to consist in a process of imbibition, in which the so-called "secondary" or "accessory discs" give up the water which is requisite for the swelling of the anisotropal discs.

CUSTOM HOUSE OFFICERS, ETC.

DR. DICKSON'S annual report of the health of the out-door officers, watermen, messengers, &c., in the Port of London for 1880, as usual, is a document of some interest, showing the diseases to which a set of men between twenty and seventy, fairly representing the comfortable classes, are liable. The chief diseases were rheumatism, gout, catarrh, bronchitis. To the credit of the Customs, and those who medically advise the department, there was only one case of small-pox. In no instance was febrile zymotic disease believed to be contracted on duty. Affections of the respiratory organs constituted 31 per cent. of the sickness, and caused five out of sixteen deaths. With more care against cold, and a little extra precaution against the causes of rheumatism and gout, whatever they may be, the health of Her Majesty's Customs would be very satisfactory.

LONDON SANITARY PROTECTION ASSOCIATION.

WE have received the prospectus of this Association, of which Professor Huxley is chairman, and Sir William Gull, Dr. Acland, Dr. Bristowe, Dr. Andrew Clark, Dr. Burdon-Sanderson, Mr. Holmes, and others are members of Council, with an intimation that the first general meeting is to be held in the Society of Arts Room, Adelphi, on Tuesday, the 25th instant, at 8 P.M. All members of the medical profession will be admitted on presenting their cards at the door. This Association has not been established for purposes of profit, but has, we believe, been doing good work quietly in London for the last nine months, of which an account will be given at the meeting.

PRESENTATION TO A DEMONSTRATOR OF ANATOMY.

AT a dinner of the students of the Charing-cross Hospital held on Tuesday the 18th inst., a handsome gold watch and purse of sovereigns were presented to Mr. James Cantlie, M.A., F.R.C.S., in recognition of the energetic manner with which he has taught practical anatomy for many years past, and of his increasing work for the welfare of the school and its students. We compliment both the recipient and his donors. Incidents of this kind do much to knit together teachers and taught, and speak well for a school where such kindly feeling exists.

MR. GLADSTONE'S HEALTH.

IT is gratifying to know that Mr. Gladstone's indisposition is nothing more than may easily be accounted for by exposure after his labours at Leeds. Up to the time of our writing, his cold has not been of sufficient gravity to require the attendance of his usual medical adviser.

SCHOOL OF PHYSIC, TRINITY COLLEGE, DUBLIN.

A MEETING of the Fellows of the College of Physicians in Ireland was held last Tuesday, for the purpose of appointing a successor to Dr. Aquilla Smith in the chair of Materia Medica and Practical Pharmacy. Of the two candidates for the post, Dr. Walter G. Smith was successful. Dr. Smith is a son of the gentleman who previously filled the chair, is a vice-president of the College of Physicians, physician to the Adelaide Hospital, and the author of a Commentary on the Pharmacopœia. The appointment is one which must give general satisfaction.

STAFF-SURGEON MAHON, R.N.

IT is announced that the distinction of the Victoria Cross is to be conferred on Staff-Surgeon Mahon, Royal Navy, for his gallant conduct at the battle of Amaquiba Hill. Dr. Mahon remained with the wounded under heavy fire, and at great personal risk continued his exertions to succour the dying soldiers and blue jackets till surrounded by the Boers. The Lords of the Admiralty have already signified their high appreciation of his heroic conduct by specially promoting him to the rank of staff-surgeon.

THE ROYAL COLLEGE OF SURGEONS.

AT a quarterly meeting of the Council on the 20th inst., Mr. John Croft, of St. Thomas's Hospital, was elected a member of the Court of Examiners, in the vacancy occasioned by the resignation of Mr. John Marshall, F.R.S., Vice-President of the College.

THE governing body of Gonville and Caius College, Cambridge, has decided that, in lieu of the Thruston speech, heretofore delivered annually, the speaker receiving the sum of £118, there shall be given triennially about £54 in money, or in any other form that may be thought best, to the member of the College who shall, in the course of the preceding three years, have published the best original investigation in physiology (including physiological chemistry), pathology, or practical medicine. The prize-winner will be required to give an account o his investigation in the form of a lecture in the College. I within the specified period no investigation of sufficient merit shall have been made, the money shall be carried forward to augment future prizes. The scheme is to come into operation immediately, and the prize will be first awarded in 1884.

WE are requested by the Honorary Secretary General of the International Medical Congress to announce that there are a few copies of the Commemorative Medal still undisposed of, and that members of the Congress and others can have them on application to him at 13, Harley-street. The price to members is 10*s.* 6*d.*; to non-members, 21*s.* As the accounts will soon be closed, it is hoped that those desiring to possess a medal will apply at once.

THE death is announced of Mr. Stephen Jenner, son of the late Dr. Henry Jenner, and great-nephew of the discoverer of vaccination. The deceased is said to have been one of the first individuals upon whom Dr. Jenner performed the operation. He was eighty-seven years of age at the time of his death, which took place at Heathfield, near Berkeley, where he had lived for many years in humble circumstances, having obtained considerable reputation as an artist and caricaturist.

AT the Thames Police-court on Wednesday, a medical practitioner of Pimlico was summoned for signing a death certificate without having seen the deceased (an infant) during life. The case was instituted by the Medical Alliance Association, and the offence having been proved to the satisfaction of the magistrate, a fine of £10, with costs, was imposed.

DR. GEORGE JOHNSTON has been re-elected President of the College of Physicians in Ireland for the ensuing year.

PROFESSOR WILLIAM RAMSAY has been appointed Principal of University College, Bristol.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

THE SANITARY CONDITION OF WALTHAMSTOW.

The medical officer of health of Walthamstow has recently presented a report on the sanitary, or rather insanitary, condition of that place to the Local Board, which should awaken considerable anxiety in the minds of residents, or proposing residents, there. The report is given at length in the local journal, the *Walthamstow and Leyton Guardian*, and deserves the careful attention of all who are interested in the locality. It appears that the mortality from all causes during the month of September reached the exceptional annual rate of 27·41 per 1000 of the inhabitants, and that this arose from a large increase of the number of deaths from zymotic causes. Diphtheria and scarlet fever had especially contributed to the fatality, and typhoid fever had shown itself in the district. The medical officer of health describes private roads as receptacles for the refuse of neighbouring houses, the surface little better than a bog. The sewers, he says, "are either faulty or badly laid, in many places nothing but reservoirs of stagnant sewage; and the cesspools, at least such as I have seen uncovered, are simply percolation pits, uncemented, and with board tops full of foul black sewage, which permeates through their sides freely, saturating the gravel soil for yards around." Walthamstow is, it would seem, a neighbourhood where the process of making a place permanently unhealthy may conveniently studied.

THE SMALL-POX AMBULANCE STATION AT LONDON FIELDS.

The Hackney Vestry having written to the Local Government Board protesting against the establishment of a small-pox ambulance station in George-street, London-fields, the Local Government Board have forwarded them the copy of a letter addressed by the Board in reply to a similar protes from the Rev. S. J. Stone, vicar of St. Paul's, Haggerston. The Local Government Board express the opinion that the site in question was most eligible for the purpose, being in

the parish, which, owing to the prevalence of small-pox, would be the most benefited by the establishment of the station, and that every precaution was taken to prevent any spread of the disease by the removal of patients, and the carrying out of the ambulance arrangements, in connexion with the same.

THE HOMERTON SMALL-POX HOSPITAL.

In consequence of the steady and continuous increase in the number of fever patients in the northern and eastern districts of the metropolis, the managers of the Metropolitan Asylums Board, with the concurrence of the Local Government Board, have considered it necessary to close the small-pox hospital at Homerton against the further reception of small-pox cases, and to appropriate it for the treatment of fever patients. The parishes and unions hitherto allocated to Homerton for the purpose of small-pox, are therefore re-allocated to the hospital ship *Atlas;* a portion of the hospital at Homerton, however, being retained for the accommodation of such severe cases of small-pox as it may be deemed inadvisable to remove to the *Atlas*.

The Metropolitan Asylums Board have so far descended from their lofty pedestal as to issue a circular-note to the vestries and district boards of the metropolis on the subject of their apparently recent excessive expenditure. They plead the unexpected and unforeseen demands for hospital accommodation which had been made upon them during the past year, and in other ways justify, or attempt to justify, their financial procedure; but they do not explain the particular items which have disturbed the equanimity of the various vestries and district boards.

It would appear that pigs have established themselves in force in East London, at Old Ford, and that the vicinity of Victoria-park is threatened by the nuisances which are believed to be (wrongly we hold) inseparable from the animal. It is stated, however, that the pigs have not invaded the residential parts of the district referred to, but that the residences have invaded the pigs' territory. Hence, a difficulty not easily overcome.

The ratepayers of Ilford are still agitated on the question of forming a local board. At a recent meeting a committee of ratepayers was appointed to have an interview with the board of guardians—the rural sanitary authority—on the subject. An impression prevailed that the guardians had discussed the question of the drainage of the district, and might have a scheme in hand for dealing with this, the most pressing sanitary subject for consideration in the locality.

The Local Government Board having declined to consent to a proposition of the Eastbourne guardians to pay their vaccination officer the sum of 1*s.* 4*d.* for each case of successful vaccination, it was agreed at a meeting of the board to seek permission to make a payment of 1*s.* in all cases, whether successful or not.

The question of the sewerage of Chertsey and its vicinity is still exercising the minds of the local sanitary authority. At a recent meeting of the board it was agreed that "the consideration of the proposed drainage scheme be deferred for a month, and that nothing further be done at present."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The rate of mortality last week showed a further increase upon that which prevailed in recent weeks. During the week ending last Saturday 5049 births and 2985 deaths were registered in twenty of the largest English towns. The annual death-rate in these towns, which had not exceeded 17·9 and 18·8 per 1000 in the two preceding weeks, further rose last week to 20·5. The lowest rates in these towns last week were 14·8 in Leicester, 15·1 in Bristol, 16·3 in Portsmouth, and 16·6 in Norwich; the rates in the other towns ranged upwards to 22·6 in Birmingham, 25·5 in Nottingham, 26·6 in Hull, and 27·9 in Liverpool. The deaths referred to the principal zymotic diseases in the twenty towns were 501, showing an increase of 50 upon the number in the previous week; they included 170 from scarlet fever, 81 from diarrhœa, 71 from measles, 63 from "fever" (principally enteric), 61 from whooping-cough, 29 from diphtheria, and 23 from small-pox. The annual death-rate from these zymotic diseases averaged 3·4 per 1000 in the twenty towns, and ranged from 0·8 in Leeds, to 6·6 in Liverpool and 12·4 in Hull. The fatality of scarlet fever showed a general increase, and was proportionally largest in Hull, Nottingham, Sunderland, and Leicester; no fewer than 33 fatal cases of this disease were recorded in Hull, making 286 that have occurred since the beginning of July last. Of the 29 deaths from diphtheria in the twenty towns, 13 occurred in London, 5 in Portsmouth, and 5 in Birmingham. The highest death-rate from enteric fever occurred in Oldham and Salford. Small-pox caused 25 more deaths in London and its outer ring of suburban districts, and 1 in Bradford; no fatal case of this disease was recorded in any of the eighteen other provincial towns. The number of small-pox patients in the metropolitan asylum hospitals, which had declined from 582 to 422 in the four preceding weeks, were 443 at the end of last week, which included 139 in the *Atlas* hospital ship, and 22 in the Convalescent Camp Hospital at Darenth. The new cases of small-pox admitted to these hospitals, which had been 84, 70, and 51 in the three preceding weeks, rose again to 62 last week. The deaths referred to diseases of the respiratory organs in London, which had steadily increased in the six preceding weeks from 115 to 227, further rose to 279 last week, and exceeded the corrected weekly average by 25; 172 resulted from bronchitis and 77 from pneumonia. The causes of 77, or 2·6 per cent., of the deaths in the twenty towns last week were not certified either by a registered medical practitioner or by a coroner. The proportion of uncertified deaths, which did not exceed 1·2 per cent. in London, averaged 3·9 per cent. in the nineteen provincial towns. All the causes of death were duly certified in Portsmouth, Norwich, and Plymouth, whereas the proportions of uncertified deaths were largest in Salford, Oldham, and Sunderland.

HEALTH OF SCOTCH TOWNS.

The annual death-rate in eight of the largest Scotch towns, which had been equal to 17·4 and 18·8 in the two preceding weeks, further rose last week to 21·4, and exceeded by 0·9 the average rate in the twenty large English towns. The deaths referred to the principal zymotic diseases in these Scotch towns, which had been 86 and 71 in the two previous weeks, rose last week to 108; of these, 37 resulted from diarrhœa, 23 from diphtheria, 22 from scarlet fever, 13 from "fever," 8 from whooping-cough, and 5 from measles. The deaths attributed to acute diseases of the lungs (bronchitis, pneumonia, and pleurisy), which had been 83 and 96 in the two previous weeks, further rose to 108 last week, and were equal to an annual rate of 4·9 per 1000, against 3·5 from the same causes in London.

HEALTH OF DUBLIN.

The annual death-rate in Dublin, which had been equal to 17·8 and 18·7 per 1000 in the two preceding weeks, was 18·2 last week. During last quarter the death-rate in the city averaged 20·0 per 1000, against 20·5 in London and 17·0 in Edinburgh. The 122 deaths in the city were within 3 of those in the previous week, and included 12 which were referred to the principal zymotic diseases, of which 7 resulted from "fever, 4 from diarrhœa, and one from scarlet fever; no fatal case of small-pox, measles, diphtheria, or whooping-cough was registered. The annual death-rate from these zymotic diseases was equal to 1·8 per 1000, while the rate from the same causes was 3·1 in London and 3·8 in Edinburgh. The deaths referred to "fever" (typhus, enteric, or simple), which had been 5 and 3 in the two previous weeks, rose to 7 last week, and were equal to an annual rate more than twice as high as the average rate from the same cause in the twenty large English towns. The fatal cases of the other zymotic diseases were exceptionally few, although those referred to diarrhœa showed an increase. The deaths, both of infants and elderly persons, were considerably less numerous than those in the previous week.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

MILK INSPECTION.

At a meeting of the North-western Association of Medical Officers of Health, on the 14th inst., Mr. F. Vacher read a paper on "Milk Inspection and the Control of the Milk Supply," in which the author argued that additional powers

were wanted to enable a local authority to veto the sale of milk by vendors coming from without such authority's district, and also to require licensed milk sellers to notify all cases of infectious disease appearing on their premises, with ability to close such premises till the removal of the infected animal and the disinfection of the premises. He thought that were the supervision of the important work of milk inspection committed to one responsible officer under the Local Government Board, local authorities would be encouraged to do their utmost to give effect to the Privy Council regulations and any other powers possessed by them in this respect, whilst any amendments of the law which might be necessary would be pointed out and brought under the attention of those able to undertake them.

TYPHOID FEVER IN AMERICA.

The Board of Health of Boston, U.S.A., has notified to the medical practitioners of that city that henceforth cases of typhoid fever, in addition to those of small-pox, scarlet and typhus fevers, and diphtheria, will have to be returned, in accordance with the provisions of the General Statutes, under penalty of the usual fine. This step has, it is understood, been taken in consequence of the somewhat unusual prevalence of typhoid in Boston. The disease is also very rife in Chicago.

By news from Mecca of the 8th inst. it appears that seven deaths from cholera had occurred during the first week of the month.

THE SERVICES.

THE AMALGAMATION OF THE ARMY AND INDIAN MEDICAL SERVICES.

The *Bombay Gazette* publishes a *précis* of the despatch recently sent home by the Viceroy for the consideration of the India Office regarding the amalgamation of the Army Medical Department with the Medical Service of India. 1. The whole of the Indian Medical Service to be united with the Army Medical Department into one Imperial service, and to be styled the "Royal Medical Service." 2. Officers of the present Indian Service to be eligible for service everywhere, but not out of India except at their own request. 3. All new appointments to be made to the Royal Service, so as to maintain the whole Medical Service at its full strength. 4. Officers to be eligible for civil situations, but to return to military employment, as a rule, after five years in civil employ. 5. To form one staff for the medical duties of all India, to be composed of officers of both services and equal in strength to the present Indian Medical Staff. 6. To give all medical officers of the Indian Service the option of Indian or British retiring allowances, but this in no way to interfere with the claim to retiring allowances from the medical funds. A memorandum to the despatch adds: Perhaps it would be well to allow medical officers permitted to serve out of India to withdraw from the funds if they please, receiving a fair compensation. Another proposal is that the fund should be wound up, past subscriptions being refunded.

Deputy-Surgeon General H. R. Oswald, Madras Medical Service, has been permitted to retire from the Indian Medical Department.

Surgeon-General A. Shelton, head of the Medical Branch, Whitehall-yard, retires from the service under the sixty years' clause, on the 25th, but is to remain at the War Office till April as a supernumerary to the establishment.

ARMY MEDICAL DEPARTMENT.—Brigade-Surgeon William Langford Farmer is granted retired pay, with the honorary rank of Deputy Surgeon-General; Surgeon-Major Charles Frederick Richards, M.B., from half-pay to be Surgeon-Major; Surgeon-Major John Coates, M.D., is granted retired pay, with the honorary rank of Brigade-Surgeon; Surgeon-Major William Beale Wallis has been granted retired pay, with the honorary rank of Brigade-Surgeon. Surgeon-Major Robert Hyde has retired on temporary half-pay.

MILITIA MEDICAL DEPARTMENT.—Surgeon-Major William Henry Franklin, 8th Battalion, the Prince Consort's Own (Rifle Brigade), retires under the provisions of Clause 16, Army Circulars, 1881; also is permitted to retain his rank, and to wear the prescribed uniform on his retirement.

ADMIRALTY.—Staff-Surgeon George Mair, M.A., M.D., has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet, with seniority of September 30th, 1881.

In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeon Edward Brereton Broster has been placed on the retired list of his rank from the 7th inst.

The following appointments have been made:—Surgeon John W. Davis, M.D., to the *Alexandra*, additional for the *Bittern* when recommissioned; Surgeon Francis Williamson to the *Alexandra*, additional for the *Dewy* when recommissioned; Staff-Surgeon Bernard Renshaw to the *Magpie*, vice Sexton, deceased.

THE PARIS ELECTRICAL EXHIBITION, AND SOME OF ITS LESSONS.

THE saunterer through the courts and galleries of the Palais de l'Industrie at Paris, even though he possess no technical or scientific knowledge on the subject of electricity, cannot fail to be almost overwhelmed by the manner in which the toy of yesterday has become the world-moving power of to-day. The Exhibition shows how fatal to anything like real advancement may be the tendency in this practical age to put the question "Cui bono?" to the men of philosophic mind who occupy themselves in determining exactly the laws which control phenomena which to the casual observer may seem trivial. Our illustrious countryman, Gilbert, busying himself with the attraction of light bodies by rubbed amber, Galvani puzzling over the movements of frogs' legs when suspended by copper hooks to the iron balcony of his house in Bologna, and Franklin coquetting with the thunder-clouds and flying kites with a more than childish enthusiasm, must have seemed to the ignorant onlookers poor daft speculators, not fitted to live in this hard, practical, work-a-day world.

The discovery of the laws which regulate the development of electricity by friction (Gilbert, Franklin), by chemical action (Volta), by heat (Seebeck, Nobili), and by magnetism (Faraday) marks the great eras of the science; but those who deserve at least equal honour with the discoverers of the prime facts are those who have toiled to give a mathematical accuracy to the science, and who have devised instruments for detecting, weighing, and estimating that manifestation of energy which we call electricity. It is accurate measurement which has led gradually to something like a complete mastery of electricity; but it is fair to say that this accuracy of knowledge has arisen *because* electricity early began to be applied to practical purposes. As soon as electricity passed out of the philosopher's cabinet on to the Stock Exchange, its advance increased in rapidity in an extraordinary degree; and we have only to compare the advance which was made before the days of Cooke and Wheatstone with that which has been effected since to be reminded of the familiar proverb—"Necessity is the mother of invention."

It was in 1834 that Gauss and Weber erected an electric telegraph at Göttingen; and in 1837 Steinheil did the same thing at Munich. The following year Morse invented his telegraphic printing machine; and in 1840 lines of telegraph began to spread like spiders' webs over America, Great Britain, and the Continent. In 1851 submarine telegraphy made its beginning by the connexion of Dover and Calais. Seven years later the Atlantic was spanned by an electric cable; and in a few years more it was possible to outstrip the sun, and to flash a thought from Hong-Kong to San Francisco *vid* three entire continents and one ocean, through a length of some twenty thousand miles of wire. The telegraph showed the possibility of transmitting at least trivial amounts of force to any distance attainable on the earth, but hitherto the amounts of force practically available and transmissible by means of electricity had been very small.

Among the exhibits in the Italian section of the Paris Exhibition will be found a small electro-magnetic machine, with a transverse electro-magnet in the form of a ring. This is the invention of Professor Pacinotti of Cagliari. It was made in 1860, and first described in 1864. In this machine we have virtually the same thing as the Gramme

machine, which showed its practical importance at the Vienna Exhibition in 1873, and which by vastly increasing the amount and constancy of the force transmissible in the form of electricity has given an impulse to the uses of electricity the end of which it is difficult to foresee. By means of a Gramme machine, and a length of wire of a calibre proportionate to the amount of electricity to be transmitted, mechanical force can be transformed into electricity, and can be conveyed any distance. Arrived at its journey's end, this electrical force can, by suitable apparatus, be reconverted into mechanical force, chemical force, heat, or light. The practical applications of this great and important fact are at the Paris Exhibition as numerous as they are interesting.

A tramway-car is incessantly carrying its freight from the Place de la Concorde to the Exhibition, a distance of a few hundred yards, its motor being an electro-magnetic machine attached to the axles of the wheels. Pumps are being worked, pianos are being played, and carding, sewing, and embroidering machines are all to be seen obeying the motive impulse of electricity conveyed to it from a distance. This porterage of force is doubtless of great interest, and we believe that whatever *can* be done in the way of work by means of electricity is now being done at the Paris Exhibition.

Our belief is that unless some natural source of force, such as a waterfall, can be utilised as the generator, electricity is not destined to be much employed for mechanical purposes; certainly not in this country, where coal, and its offspring gas, are plentiful and cheap. In the gas-holder and the gas-pipe we have the means of storing and carrying force to any distance, and by means of the gas engine we can use, or stop using, the force for mechanical purposes at any minute. At the Paris Exhibition what is really seen is this. Stored force in the shape of coal or gas is brought from a distance, and is made to set in motion a steam-engine or gas-engine as the case may be, and instead of using these engines *directly* to drive a machine, the machine (tram-car, pump, or what not) is driven through the intermediary of two electro-magnetic machines and a length of wire. There must be in almost every instance an increase of expense, increase of complication, increased risk of break-down. *Verbum sap.*

Electricity by means of suitable appliances can be converted into heat or light, the latter manifestation of force never occurring unaccompanied by the former. In the Paris Exhibition all forms of the electric light are to be seen. The electric arc sheds its dazzling brilliancy, and the incandescent wires of Swan and Edison give forth their more subdued and agreeable light. When the novelty of the electric light has passed away, people will begin to ask more closely, "What are its advantages?" Is it cheaper than other forms of artificial light? When the electric arc is used for lighting railway stations and similar localities, there can be no doubt of its economy—an economy which becomes more marked when a natural source of force is used to drive the machines. The economy of using incandescent light, whether for public or private purposes, has yet to be shown. It is certain that the amount of motor power required for the production of a given intensity of light is very great indeed.

The incandescent lamp does not foul the air at all, and the electric arc fouls it to a minimum extent. These are solid advantages, but electricians and architects will have to remember that our public and private rooms will, nevertheless, require careful ventilating. Gas, which cannot burn without a considerable current of air, ought to be the very good friend of any architect who really tries to ventilate a gas-lighted room, and we doubt not that the rivalry of the electric light will bring architects and gas engineers to their senses in this important matter. It is believed by some that the electric light causes no *heat*. This is a great error. The ratio of heat to light is much smaller than with gas or oil, but, nevertheless, the heat is very considerable, and the fact remains that at the Paris Exhibition the rooms at the west end of the building, lighted by the Jablochoff system, were as hot and foul as any rooms we were ever in. It may be that the ventilation of these rooms had been entirely neglected. Such, in fact, seemed to us to be the case. If so, our clever neighbours have been guilty of a great oversight, and have done injustice to the cause of electric lighting. It must be borne in mind that the ventilation of rooms and theatres lighted by electricity will probably prove a more difficult problem than the ventilation of gas-lighted rooms, which is easy enough if architects would think of the flues when they plan their buildings. Among drawbacks to the electric light are its unsteadiness and occasional failure, and the durability of the incandescent lamps has yet to be shown. In the end it will probably be found that gas and electricity have each an advantageous sphere of action, and we believe that neither is destined to achieve a victory over the other, but that in the end the battle will be "drawn." The one fact certain is this, that the rivalry of the two lighting agents is sure to benefit the public. Many great improvements in gas lighting have taken place since the use of the electric light has become general, and we trust that this progress will continue. Possibly the gas companies will, in time, see the necessity of teaching the public how gas may be used not only to give light, but actually to aid in the ventilation of apartments, which it now renders foul and uninhabitable. We shall revert to other matters connected with the progress of electricity in another article.

Correspondence.

"Audi alteram partem."

HOMŒOPATHY AND THE BRITISH MEDICAL ASSOCIATION.

To the Editor of THE LANCET.

SIR,—With reference to your annotation in THE LANCET of the 15th inst., p. 678, under the above heading, your information as to the action I took in the matter seems to me rather inaccurate.

The case was as follows. The President of one of the branches wrote in July last to the Council of the Association, stating that a member of his branch was a homœopathic practitioner of so pronounced a type that unless this gentleman's name was withdrawn from the Association the President, and several members of the branch, must resign. From inquiries made at the time this communication was received, it appeared that when this gentleman was admitted a member of the Association there was no evidence of his having been a homœopathist. Under these circumstances I pressed that one of the by-laws of the Association should be enforced, by which a complaint having been raised against a member of the Association the individual so complained of is given notice of the fact and the nature of the charge brought against him, with a request that, within a reasonable time, he should withdraw his name from the list of members of the Association. Action such as this would, of course, give the member complained of an opportunity of answering the charges brought against him, and so, perhaps, of clearing his character; if such should not be the case the Council have the power, subsequently, to remove his name from the Association.

The position I took at the meeting in question was that although there are many thoroughly honest and conscientious homœopathists in this country, I could hardly conceive it possible that such men would belong to the British Medical Association, which has for its object the promotion of social intercourse, union and united action among medical practitioners as opposed to homœopathists *et hoc genus omne*. If, therefore, a member of the profession after joining the Association becomes a homœopathist, he is bound to withdraw from our Society, for he will no longer have any real interest in its prosperity or objects. Doubtless a certain class of homœopathic practitioners might have reasons of their own for wishing at times to appear before some of their neighbours as orthodox medical practitioners; and if such should be the case, what better mark of their professional status could they require than that of being members of a Society constituted to guard the interests and advance the status of orthodox medical practitioners? But surely men of this stamp are the very individuals the British Medical Association have to guard themselves from. It was not, however, argued that it was the business of the Council to hunt up, and much less to prosecute, homœopathists, any more than it is the duty of a judge to seek out offenders against the law; but I think it is the office of the Council to deal with individual cases of the kind referred to above.

These sentiments, however, for the reasons alluded to by you, were not acceptable to a large majority of the committee

of Council; they rather determined to leave this case alone, and to reaffirm in a very emphatic manner the principles formerly expressed by the Association against homœopathists in general—in this way, as far as I can judge, declining to enforce their principles, and illustrating forcibly the prevailing sentiments of the hour, to lecture, and even abuse, offenders, if it is a relief to you to do so, but "hands off," please, for *us*, at any rate. I am, Sir, yours truly,

Grosvenor-street, W., October 17th, 1881. C. MACNAMARA.

To the Editor of THE LANCET.

SIR,—In your article commenting on the proceedings of the committee of Council of the British Medical Association in regard to homœopathy, there is a statement which is calculated to mislead your readers. You say that "a letter was read from the president of one of the branches of the Association, stating that a homœopathic practitioner in his neighbourhood had been admitted a member of the Association." This version is hardly correct. The fact is this gentleman was not a homœopath when he was elected a member of the Association, but has unhappily become one since his election. Your sense of justice will, I am persuaded, allow this slight correction to appear in your next issue, for your comments would lead your readers to suppose that a homœopath had found his way into our ranks through the negligence and carelessness of some unfortunate branch secretary.—Faithfully yours,

CHARLES PARSONS, M.D., Hon. Sec.,

Dover, October 19th, 1881. South-Eastern Branch.

DR. RUSSELL REYNOLDS' ADDRESS.

To the Editor of THE LANCET.

SIR,—Allow me through your journal to congratulate the members of the Medical Society of University College (where I formerly studied) for securing such a valuable practical address from Dr. J. Russell Reynolds on "Specialism in Medicine." The address ought to be read by every member of the profession, for it exposes quackery, specialism, and unworthy professional conduct. Such proceedings as alluded to are unfortunately sadly too often adopted for the mere reason that money is the object sought, and not the cure of the patient. Dr. Russell Reynolds resided in this town for a short time just after entering the profession, and he acted wisely in removing to the metropolis. His writings have been numerous and valuable, and his "System of Medicine" has become a standard work of reference to both old and young practitioners, and his reputation as a learned physician stands high, both at home and abroad. It is to be wished that more of the fashionable doctors of the day could be induced to act upon the principles laid down in this address. The conflicting testimony of medical men in our law courts is most damaging to the profession, and the mischief arising from the contradictory evidence by medical men has been over and over again pointed out by THE LANCET and by many of its readers, of which I have been one for the last forty-five years.—Yours, &c.,

J. INGHAM IKIN, F.R.C.S.

Park-place, Leeds, October 19th, 1881.

THE COLLEGE OF PHYSICIANS AND THE APOTHECARIES' HALL.

To the Editor of THE LANCET.

SIR,—I am one of the many who would view with deep regret the obliteration of the Apothecaries' Company as an examining body. Which of us, who has reached middle age, has not years since heard veteran practitioners, whose one diploma emanated from the College of Surgeons, make such a speech as the following:—"The Hall is a nasty quirky examination; it demands a knowledge of such a multiplicity of subjects. Now, at the College only anatomy and surgery are required, so I preferred to go there." In due course these gentlemen obtained, by purchase, the fellowship of the College, and, to their discredit be it said, proceeded to sneer at "country apothecaries." The fact is, that in days gone by the country apothecaries were the men best qualified to practise the profession of medicine. I obtained my diploma from the Hall in 1838, and can honestly assert that Dr. Stephen Ward and other examiners put me thoroughly through my facing before permitting me to practise. Again, Sir, stores are rapidly elbowing the druggist out of the market in the sale of drugs. The opinion is fast gaining upon the public mind that the general practitioner is the man bound to dispense the physician's prescription. In other words, a return to the days of open surgeries or apothecaries' shops looms in the near future. Will the College of Physicians license the future keeper of such shop? The apothecaries of the past were by no means geese, as I, having purchased the practice of a late "country apothecary," am prepared to testify. An examination of the deceased practitioner's books informs me that forty years ago he treated tuberculosis with chloride of calcium. Truly, there is nothing new under the sun.

And now a word in reference to the College of Physicians. Beyond doubt that august body acted wisely in refusing to mix itself up either with the examination of the general practitioner or the man-midwife. Pressure of public opinion compelled it, however, in 1858, to open its doors to both classes. Now for results. Pass-men merely holding its licence not only call themselves physicians, but actually assume the title of "Dr." The younger members of the profession tell us elders that "the College is on its last legs," and that the physicians-consultant of the future will be London M.D.'s. The bulk of the profession would, as we all know, be grieved beyond measure to see the good old well-tried and well-proven membership of the London College superseded by any M.D. I should rejoice to see the London College wrap itself in its dignity once more. Of course, the College is susceptible of improvement; but, then, what body is not? I am, Sir, yours truly,

October, 1881. M.D., M.R.C.S., L.S.A.

*** Our correspondent's argument is not flattering or encouraging to the profession. He seems to think that we are all going backward—to open shops, and to an organisation of the profession in which nine out of ten men are to be superior druggists—apothecaries—to serve under an exceptional class of consultants. How is it possible, when the Colleges of Physicians are now by the force and the fitness of things displacing the Apothecaries' Society, to maintain the old system, even if it were desirable? which we deny. We have never doubted that the Apothecaries' Society did good when Royal Colleges were above their proper business; but that time has passed and cannot be recalled. For the good work done the Apothecaries' Society has been amply rewarded. It would be a monstrous doctrine that a corporation—a trading corporation—for fifty years' work of the most profitable character, after its *raison d'être* had ceased, should be retained in perpetuity, and that by a tax on the medical profession of future generations, who will not think of taking its licence when the licence of the State or of two Royal Colleges will be obtainable. In the name of the profession we object to the continuance of the designation and class of apothecaries. We are members of what should be a learned and liberal profession. Let us get rid of trade labels and associations. Our correspondent's own titles contradict his arguments, especially when the chronology of them is considered.—ED. L.

FILARIA SANGUINIS HOMINIS AND FEVER.

To the Editor of THE LANCET.

SIR,—The subject of a diurnal periodicity of the filaria sanguinis hominis having now been very satisfactorily discussed by Dr. Stephen Mackenzie (the main result being that such periodicity is, as might have been anticipated, of a strictly contingent character), I should like through your columns to ask Dr. Manson if, as regards his case No. 2 (the lad Tiong-Seug), he be of opinion that the febrile attack of the 16th day of July onward, was connected with the previously great abundance of filariæ in the blood on the 14th and 15th days?

This question is submitted because at Bombay, five years ago, I had seen reason to associate the seasonal periodicity of elephantoid (or lymphatic) fever with not only the well-known concurrent disturbance of some part of the lymphatic

system, but also the appearance, perhaps unusual abundance, of the parasite in the circulation, and there appears to be a connexion of this kind in the case just alluded to.

I am, Sir, your obedient servant,

London, October 19th, 1881. H. V. CARTER.

Medical News.

UNIVERSITY OF DURHAM. — The following candidates have recently passed the First M.B. Examination :—

Frederick Ernest Abbot, Charles S. Blair, Howard Albert Bredin, William Maberly Buxton, Ambrose Edward Charpentier, Arthur Wm. Dawson, H. Gardiner Hill, M.R.C.S., George David Johnston, H. P. Keatinge, John Inglis Parsons, Septimus T. Pruen, Geo. Hook Rodman, Daniel Thurston, William Owen Trown, Robt. W. Watson.

COLLEGE OF PHYSICIANS IN IRELAND. — At the October Examinations the following obtained the Licences in Medicine and Midwifery of the College :—

MEDICINE.—George Abbott, Francis George Bonynge, Mark Andrew Brennan, Patrick Joseph Dempsey, Walter William Stockton Jones, Charles Louis Lumley, Francis Edward McFarland, Vincent John Magrane, Lyster Andrew Nolan, Daniel M. O'Connor, Charles Parsons, John Alexander Cairns Penny, John Tuthill.

MIDWIFERY.—George Abbott, Francis George Bonynge, Walter William Stockton Jones, Charles Louis Lumley, Vincent John Magrane, Lyster Andrew Nolan, Charles Parsons, John Alexander Cairns Penny, John Tuthill.

The following Licentiates have been admitted Members :—

James Chalmers Cameron, George Cochet Chesnaye (Surgeon-Major, Indian Army), John Nield Cooper, Thomas O'Dwyer Russell, Richard Baker Smith, George Westby.

QUEEN'S UNIVERSITY IN IRELAND.—The following Degrees were conferred last week by his Grace the Duke of Leinster, Chancellor of the University :—

DOCTOR IN MEDICINE.—*First Honour Class:* Havelock Henry Charles, Thomas Sinclair.—*Second Honour Class:* George L. Galpin, William Henry Lendrum, Francis McLaughlin, James Pinkerton, David Semple.—*Upper Pass Division:* Warwick Long Child, Timothy Dilworth, William Walter Gibson, Patrick F. Graham, James W. B. Hodson, John Kennedy, William J. R. Knight, John S. Logan, Robert W. S. Lyons, Samuel Macauley, William O. Maher, Edward J. Parry.—*Lower Pass Division:* Robert Anderson, Wm. G. K. Barnes, John G. Black, John Blair, Samuel Connor, James Craig, Charles Daly, John Dodd, Charles Dundee, Alexander John Fleming, David Forsyth, Henry Harper, Robert Henry, Michael Jennings, John L. Jaquet, Samuel W. Johnson, Walter C. Johnson, Samuel F. Longheed, Daniel Lynch, Edward McConnell, Thomas S. McConnell, Robert James McCormack, Joseph R. McDonnell, Beattie McFarland, Jeremiah McKenna, W. McMurray, John R. McNeill, William N. McWilliam, James Minniece, Gerald Mitchell, David T. Monteith, William Arthur Moynan, William Nelson, David Valentine O'Connell, Arthur O'Keeffe, Robert J. O'Malley, George H. Powell, Richard M. Ralph, John Redmond, Archibald C. Robinson, R. Rutherford, David M. Saunders, William D. Sexton, James Simpson, Henry Sinclair, Robert Stewart, Edward James Holmes Sullivan, George M. Thompson, John M. Trimble, Felix C. Vinrace, Charles H. Wheeler, Charles Wiseman.

MASTER IN SURGERY.—Robert Alexander, Joseph Anderson, William G. K. Barnes, John Blair, Richard Campbell, Havelock H. R. Charles, W. Naunton Davies, Timothy Dilworth, John Dodd, A'ex. Fleming, George Luck Galpin, James Geraghty, Patrick F. Graham, Robert Henry, James W. B. Hodson, Edward Horan, John Kennedy, William Henry Lendrum, J. Smythe Logan, Daniel Lynch, R. W. Steele Lyons, Samuel Macauley, Robert McCormack, Jeremiah McKenna, Wahab McMurray, John Robinson McNeill, W. O. Maher, James Minniece, Gerald Mitchell, David Taylor Monteith, William A. Moynan, James Mullin, John F. L. Mullin, William Nelson, James A. Oaksbott, Arthur O'Keeffe, David J. O'Malley James Pinkerton, George H. Powell, David M. Saunders, David Semple, Henry Sinclair, Thomas Sinclair, William Smyth, Robert Stewart, Jeremiah Sugrue, Edward J. Holmes Sullivan, George M. Thompson, John M. Trimble, Felix Coulson Vinrace, Charles H. Wheeler, James B. White, James F White.

DIPLOMA IN MIDWIFERY.—J. Greer Black, John Blair, Havelock H. R. Charles, Warwick L. Child, Samuel Connor, Charles Daly, W. Naunton Davies, Timothy Dilworth, Patrick F. Graham, John Kennedy, William H. Lendrum, J. Smythe Logan, David Lynch, Robert J. McCormack, Jeremiah McKenna, W. Odillo Maher, James Minniece, James Mullin, James A. Oaksbott, David V. O'Connell, Arthur O'Keeffe, James Pinkerton, George H. Powell, Richard M. Ralph, John Redmond, David M. Saunders, David Semple, Henry Sinclair, Thomas Sinclair, Edward J. Holmes Sullivan, David Taylor, George Matthew Thompson, James B. White, James E. White.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Oct. 13th :—

Deane, Herbert Edward, Sutherland-gardens, St. Peter's Park.
Donald, James, St. Leonard's Place, Kingston.

At the recent examination for the Prizes in Materia Medica and Pharmaceutical Chemistry given annually to medical students by the Society of Apothecaries, the following were the successful candidates :—

1st.—Joseph Walker, Liverpool School of Medicine. A Gold Medal.
2nd.—Herbert Tanner, St. Mary's Hospital. A Silver Medal and Books.

THE sum already received in behalf of the Hospital Saturday Fund amounts to £8000. A large number of collections have yet to be returned.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—The first meeting of the session will be held at 1, Adam-street, Adelphi, to-day (Friday), at 7.30 P.M. The President, Dr. Tripe, will deliver an inaugural address at 8 o'clock, entitled "The Sanitary Condition and Laws of Mediæval and Modern London," and will refer to the diseases, mortality, and population of those periods.

UNIVERSITY OF CAMBRIDGE.—Dr. Watney and Dr Creighton have been appointed Examiners for the Second M.B. Examination; Dr. Reginald Thompson and Dr. Galabin, Examiners for the Third M.B.; and Mr. Luther Holden and Mr. Thomas Bryant, Examiners for Medical and Surgical Degrees during the ensuing year. Dr. Cheadle has been appointed Assessor to the Regius Professor of Physics. The degree of M.B. has been conferred on Edward Ground, Downing College.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The Quarterly Court of Directors was held on Wednesday, October 12th, at 5 P.M., in the rooms of the Medical and Chirurgical Society. The chair was taken by the President, Sir George Burrows, Bart. The deaths of two of the oldest members of the Society, Dr. Billing (Vice-President) and Mr. R. C. Griffiths, were announced. Two new members were elected. The deaths of two widows were reported; one had been in receipt of grants since 1833, receiving for herself and children the large sum of £2272; the husband, having been a member for only nine years, paying but eighteen guineas. Applications were read from sixty widows, nine children, and three recipients from the Copeland Fund, and a sum of £1250 10s. was recommended to be paid them at the west court. The expenses of the quarter were £37 15s. The treasurer reporting favourably of the state of the funds, the directors resolved to give the same present this Christmas as last to the widows and orphans receiving grants. An application was approved of from one widow, and a grant of £30 was given to an orphan towards his self-maintenance.

YORKSHIRE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—At the sixth annual meeting of this Association held on the 14th inst., Mr. S. W. North, the President, moved the following resolution, which was unanimously adopted :—"That the Secretary be directed, in the name of the Association, respectfully to request the President of the Local Government Board to allow the printed reports of the medical inspectors of the Board, in so far as they relate to outbreaks of disease, to be purchased in the same manner as Parliamentary papers." The following were elected officers of the Association for the ensuing year :—President : Mr. S. W. North, York. Vice-Presidents : Dr. T. Scott, Ilkley; Mr. H. Butterworth, Bradford. Committee : Dr. S. Dean, Chapeltown, Sheffield; Dr. J. Farquhar, Pudsey; Mr. E. B. Hickes, Easingwold; Mr. J. Hardwicke, Rotherham; Mr. B. B. Low, Helmsley; Dr. J. Britton, Halifax; Mr. J. W. Hime, Sheffield; Mr. W. Sykes, Mexborough. Secretary and Treasurer : Mr. J. Mitchell Wilson, Doncaster. Papers were then read by Dr. Sykes, of Mexborough, and Dr. J. M. Wilson, introducing the subject of "The Influence of Drinking Water in Originating and Spreading Fever," which were briefly discussed by the members.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ALLEN, A. H., F.C.S., has been appointed Public Analyst for the Borough of Wakefield for one year.

BAMPTON, A. H., M.D., M.Ch., has been appointed Assistant-Physician to the Plymouth Public Dispensary, vice H. Greenway, Esq., resigned.

BARTON, E. W., L.R.C.P.Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Market Rasen Urban Sanitary District.

BIRD, A., M.R.C.S., L.S.A.Lond., has been appointed Assistant Medical Officer to the Bow-road Infirmary.

CAWTHORNE, B. W., M.B., C.M.Ed., has been appointed Medical Officer for the Fifth District of the Stroud Union.

DAVISON, R. T., M.D.Aber., M.R.C.S., has been appointed Medical Officer of Health for the Hastings Rural Sanitary District.

FREEMAN, H. W., L.R.C.P.Lond., M.R.C.S.E., has been appointed Surgeon to the Royal United Hospital, Bath, vice R. T. Gore, resigned.

FRY, J. B., L.R.C.P.Lond., M.R.C.S.Eng., L.S.A.Lond., has been appointed Medical Officer of Health to the Swindon, Highworth, Cricklade, and Wootton Bassett Urban and Rural Sanitary Districts.

HALEY, W. H., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Wakefield District of the Wakefield Union.

HAMILTON, D. J., M.B., F.R.C.S.Ed., has been appointed Pathologist to the Royal Hospital for Sick Children, Edinburgh, vice Sanders, deceased.

HEWITSON, J., M.B., C.M.Ed., has been appointed House-Surgeon to the Royal Maternity and Simpson Memorial Hospital, vice Thomson, resigned.

KELLY, H. J., M.D. St. And., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Castle Bromwich District of the Aston Union.

MCNEILL, J. P., M.D. T.C.D., L.R.C.S.I., has been reappointed Public Analyst for Tiverton.

MURPHY, J., B.A., M.D., has been appointed Consulting Surgeon to the Monkwearmouth and Southwick Dispensary.

OGILVIE, Dr. G., B.Sc., M.B., has been appointed Physician to the Hospital for Epilepsy and Paralysis, Portland-terrace, Regent's-park, vice Dr. T. S. Dowse, resigned.

REYNOLDS, H. D., M.R.C.S., L.R.C.P., has been reappointed Medical Officer of Health for the Pembroke Urban Sanitary District.

SMITH, W. A., M.B.Oxon., M.R.C.S., has been appointed Medical Officer for the Third and Fifth Districts of the Saffron Walden Union.

STOCKER, C. J., L.R.C.P. &c., has been appointed Honorary Visiting Surgeon to the West Ham and South Essex Dispensary, vice Ryley resigned.

WAUGH, J., M.B., C.M.Ed., has been appointed House-Surgeon to the Royal Maternity and Simpson Memorial Hospital, vice Kirkpatrick, resigned.

YOUNG, H. J., M.D. St. And., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for Castle Bromwich District of the Aston Union.

[In the announcement of Mr. Woolley's appointment as House-Surgeon to St. Peter's Hospital, last week, the word "resigned" was accidentally omitted after Mr. Williams's name.]

Births, Marriages, and Deaths.

BIRTHS.

CASSIDY.—On the 15th inst., at Guilford-street, Russell-square, the wife of Joseph Lamont Cassidy, M.D., of a son.

GRAVES.—On the 19th ult., at Meerut, North-West Provinces, India, the wife of Surgeon-Major W. Graves, Army Medical Department, of a son.

MCDONAGH.—On the 17th inst., at Mornington Villa, Hampstead-road, the wife of James McDonagh, jun., M.R.C.S.E., of a son.

SHAW.—On the 15th inst., at St. James's Lodge, Enfield Highway, Middlesex, the wife of George Shaw, M.R.C.S., of a son.

SUGDEN.—On the 15th August, at the Hospital House, Maryborough, Queensland, the wife of D'Arcy Sugden, L.R.C.P.Lond. &c., Resident Medical Officer, of a daughter.

WICKHAM.—On the 14th inst., at The Hermitage, Rufford, Ormskirk, the wife of Henry Wickham, M.R.C.S.E., of a son.

MARRIAGES.

BAVIN—STEDMAN.—On the 17th inst., at Christ Church, Highbury, by the Rev. Paul Methuen Stedman, Vicar of Thurston, Suffolk, assisted by the Rev. Wm. Jas. Chapman, Vicar, Benjamin Bavin, Solicitor, of Norwich, to Alice Maud Mary, only daughter of James H. Stedman, Surgeon, of 5, Aubert-park, Highbury, N.

BOISSIER—HARINGTON.—On the 11th inst., at St. John Baptist, Bath, Arthur Henry Boissier, L.R.C.P.Lond., M.R.C.S.E., of Pocklington, Yorks, to Octavia Georgiana (Eva), youngest daughter of the late Colonel T. L. Harington, 5th Regiment Bengal Light Cavalry.

RICE—COOK.—On the 15th inst., in St. Margaret's, Plumstead-common, George Rice, M.B., C.M., to Florence Mary, eldest daughter of John Cook, of Merton Villa, Plumstead-common.

WEBSTER—LOGAN.—On the 16th August, at St. Paul's Church, Kentville, Nova Scotia, by the Rev. Joseph Hogg, of Moncton, assisted by the Rev. William Donald, of Pictou, A. Douglas Webster, M.D., L.R.C.P., L.R.C.S., of 1, Minto-street, Edinburgh, to Mary W. P., only daughter of the Rev. J. B. Logan, of St. Paul's Church, and granddaughter of the late Rev. James Parsons, of York.

DEATHS.

BARNARDO.—On the 17th inst., at Birkdale-park, Southport, Isabelle Florence, the beloved wife of Dr. F. A. Ernest Barnardo, aged 26.

DAY.—On the 13th inst., at Hambrook Lodge, Ilfracombe, Edwin Day, M.R.C.S., late of Court House, Hambrook.

GWILLIM.—On the 14th inst., at the residence of his son-in-law, at Barton-on-Trent, William Gwillim, M.R.C.S., L.S.A.Lond., aged 86.

RAWSON.—On the 12th inst., at Barrowville, Carlow, Ireland, Thomas James Rawson, M.D., in his 73rd year.

SEXTON.—On the 11th inst., at Hongkong, China, Septimus Sexton, M.D., Staff-Surgeon, Royal Navy, H.M.S. *Magpie*.

SIMPSON.—On the 13th inst., suddenly, at Banchory-terrace, Kincardineshire, N.B., George Alexander Simpson, M.D., of Highgate, London, aged 36.

SMITH.—On the 8th inst., at Sheffield, Charles Smith, B.A.Cantab., M.D.Edin., aged 57.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Oct. 20th, 1881.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Oct. 14	29·11	S.W.	58	51	..	59	46	·44	Cloudy
,, 15	30·08	N.W.	45	41	..	52	38	..	Bright
,, 16	30·29	N.E.	46	42	..	50	31	..	Bright
,, 17	30·49	N.W.	37	53	..	54	30	..	Foggy
,, 18	30·30	S.E.	42	40	..	55	34	..	Foggy
,, 19	30·17	S.E.	46	40	..	52	38	..	Bright
,, 20	29·90	S.E.	47	44	..	53	40	..	Bright

Medical Diary for the ensuing Week.

Monday, Oct. 24.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Thomas Bryant, "On a Case of Amputation of the Thigh for Knee-joint Disease in a Man the subject of Phthisis."—Dr. Radcliffe Crocker, "On a Case of Congenital Syphilis with Enlarged Spleen and Thickening of the Cranial Bones."

Tuesday, Oct. 25.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. Jonathan Hutchinson, "On Gangrenous Eruptions in connexion with Chickenpox and Vaccination."—Mr. Clement Lucas, "On a Case of a Healthy Child Suckled by a Mother Inoculated with Syphilis subsequent to its Birth."

Wednesday, Oct. 26.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department.—1.45 P.M., and on Saturday at 9.15 A.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

HUNTERIAN SOCIETY.—8 P.M. Mr. Stevens will show a Tumour of the Brain.—Mr. T. E. Adams, "On Injuries to the Arteries of the Lower Extremities."

Thursday, Oct. 27.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

ABERNETHIAN SOCIETY (St. Bartholomew's Hospital).—8 P.M. Mr. Bowlby, "On the Treatment of Wounds."

Friday, Oct. 28.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

QUEKETT MICROSCOPICAL CLUB.—8 P.M. Ordinary Meeting.

CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. T. C. Dent, "On a Case of Strangulated Hernia (Littre's) or Partial Enterocele."—Dr. Churion (Leeds), "On a Case of Cholesterin-containing Fluid in the Pleura." Mr. Reeves, "On a Case of Stricture of the Pharynx and Œsophagus, with special reference to Gastrotomy and Œsophagotomy."—Dr. Stephen Mackenzie, "On a Case of excessively High Temperature."

Saturday, Oct. 29.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Local papers containing reports or news-paragraphs should be marked.

We cannot prescribe, or recommend practitioners.

Lectures, original articles, and reports should be written on one side only of the paper.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

MEMORIAL BRASS TO SURGEON LANDON, ARMY MEDICAL DEPARTMENT, AT ST. BARTHOLOMEW'S HOSPITAL.

THE following subscriptions have been received:—

Howard Marsh, Esq., London	£1 1 0
E. L. Archer, Esq., Newcastle-on-Tyne	0 10 6
W. G. Archer, Esq., Birmingham	0 10 6
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C. E. HARRISON, M.B. NORMAN MOORE, M.D.
JOSEPH MILLS. W. E. STEAVENSON, M.B.

Oct. 19th, 1881.

Pacomnia.—The introduction of the hand into the uterus is, of course, more or less an act of violence, though, if done with care and gentleness, not so serious perhaps as used to be thought. It tends to injure or bruise the uterus. If the uterus be contracted, and its tissue morbidly soft, a careless operator might even lacerate it. Another risk of the introduction of the hand is that of conveying septic material.

FEES TO PARISH DOCTORS.

To the Editor of THE LANCET.

SIR,—With reference to the letter signed "F. G." in the *Morning Post* and copied into your last number, also leading article thereon and Poor-law Medical Service, I beg to say that in my opinion the letter of "F. G." is one to which "Audi Alteram Partem" applies, as, with the exception of No. 5 case, where he says the doctor was dismissed, I should consider they are all susceptible of explanation; but irrespective of this I should imagine that the scale of fees authorised by the Poor-law is too small to make it worth while any medical man acting as "F. G." would have us believe, leaving moral considerations entirely aside. I would like to ask him if he considers £5 a temptation to a man to undertake a capital operation, with weeks and possibly months of after attendance, at probably a long distance from home, and also pay a qualified assistant to act with him at the operation, or put himself under an obligation to a medical neighbour. My own experience is directly the reverse, as my practice (as well as that of my *confrères*, as far as I know) is always, when practicable, to send such cases to hospital. As to the report of the Lunacy Commissioners, I think, Sir, your remarks thereon are so just and to the point, that further defence is necessary.

I am, Sir, yours faithfully,

The Awberries, Kelvedon Hatch, Brentwood, J. R. WHITE, M.B.
Oct. 18th, 1881.

FLOATING HOSPITALS FOR CONVALESCENTS FROM SMALL-POX.

To the Editor of THE LANCET.

SIR,—Though hospital ships are beneficial to convalescents from small-pox, I believe that their use is inadvisable in acute cases attended with delirium, exalted temperature, pains in the trunk or limbs, and high fever, where the inconvenience and exposure of a prolonged journey swell the death-rate, whilst, on the other hand, convalescents bear transportation cheerfully and with advantage.

To take a typical instance, supposing a person in Hackney is stricken with small-pox, he must first inform the parish relieving officer, who after uncertain delay causes the patient to be visited by the parish medical officer, which official gives an order to the relieving officer to remove the sick to the small-pox hospital. After a further uncertain delay the small-pox ambulance arrives to convey the small-pox patient to Potter's Ferry (just opposite Greenwich), which is a full hour's drive. The feverish patient is next taken out of the carriage and placed in the floating covered ambulance barge, which is tugged by a steam launch to the *Atlas* ship, where he is finally admitted. In all, these processes will have occupied several hours of cruel dangerous fatigue to the unfortunate pauper small-pox patient. Roughly the approximate average duration in hospital of a small-pox patient is about a month. Some 60 per cent. are probably fit to be removed to a convalescent hospital at the end of ten days; 20 per cent. at the end of seventeen days, whilst the remainder from serious sequelæ have to stay for an indefinite period in the hospital. I suggest that from the ordinary small-pox ambulances, accompanied by a medical officer and nurses, the small-pox convalescents could be removed by special steamers at an early hour in the morning down the Thames, say to Gravesend, where floating hospitals could be stationed in purer air and less tainted water than is likely to be found at Greenwich, a home of fog and filth. Each large London parish, or a collection of smaller metropolitan parishes, should have its special small-pox tents or hospitals, whilst convalescent floating hospitals should belong in common to the metropolitan area within, say, twelve miles radius of Charing-cross. Thus in a comparatively limited space a large number of acute small-pox patients could be housed, as the convalescents would be drafted off to the floating convalescent asylums.

I am, Sir, your obedient servant,

J. LAWRENCE-HAMILTON, M.R.C.S.

Gloucester-terrace, W., Oct. 17th, 1881.

Tropicus.—The reference was to a paper read by Dr. Stephen Mackenzie at the East London and South Essex District Meeting of the Metropolitan Counties Branch of the British Medical Association on April 15th last.

Anxiety has not enclosed his card.

Mr. Humphry Davy.—We are not aware that any fact has been recorded which shows that the blood of a person suffering from hydrophobia will communicate the disease, although there is evidence that the disease may be conveyed by the human saliva. Inoculation experiments with the blood of rabid animals have yielded contradictory results. Under the circumstances therefore described, no apprehension need be felt. The excision of the tissues immediately around the puncture would, however, be a harmless proceeding, and would conduce to peace of mind.

THE LEEDS GENERAL INFIRMARY: COST OF MANAGEMENT.

To the Editor of THE LANCET.

SIR,—In your issue of Oct. 8th you published some extracts from a paper read by Mr. Burdett at the Social Science Congress, held at Dublin Oct. 3rd, in which a very grave inaccuracy occurs—viz., that the cost of management per patient per week at the Leeds General Infirmary was £3 0s. 4d. As this is so far wide of the mark, I am sure you will allow me space to give the exact figures for the year 1880.

In-patients under treatment.	Average daily number of in-patients resident.	Average number of days in the infirmary.	Out-patients under treatment.	Total expenditure under all heads.
*3763	229	23	*18,225	£12,582 5s. 1d.

* These were all individual cases, not the same people registered several times over during the year.

Deducting £1700 for the maintenance of the out-patients and for sundry receipts, sale of old materials, &c., it will be found that the entire cost per patient per week was about 18s., not £3 0s. 4d., for management only, as stated by Mr. Burdett. This sum is small as compared with many other hospitals, and is much less than at the Seamen's Hospital, Greenwich, where Mr. Burdett was secretary superintendent till the beginning of this year. It is a most difficult matter to compare hospital expenditure accurately without knowing precisely the basis of management in each particular case. For instance, in some hospitals the patients have to provide their own tea, sugar, and butter; the resident staff have to provide their own food and washing. In the Leeds Infirmary everything is found for the patients and the resident staff. Again, some hospitals are built upon what is known as the block plan' others upon the pavilion plan; those of the latter class cost more in working expenses, but they have many advantages in a sanitary point of view. I enclose a copy of our last annual report.

I am, Sir, your obedient servant,

THOS. BLAIR, General Manager.

Leeds General Infirmary, Oct. 12th, 1881.

MEDICINE IN CHICAGO.

THE enterprise of the citizens of Chicago would seem not by any means to be confined to commerce. According to its chief medical organ, "during the past thirty-eight years, six medical colleges have been successfully established in the city, with constantly increasing classes, until last winter there were twelve hundred students in attendance, and there is every probability now that there will be fifteen hundred in attendance this year. The college buildings are admirably arranged, the hospitals afford every advantage for surgical and clinical instruction that could be wished for. Anatomical material is abundant and cheap. Practical anatomy is here studied under the strong protection of law, with open doors and windows, and not behind locked doors at midnight, as in some localities. Chemical and physiological laboratories and museums are increasing their facilities annually, and keeping pace with the rapid developments in these departments."

Mr. J. P. Postgate.—Reference to THE LANCET of Oct. 1st and 8th, pp. 601 and 638, will show that our correspondent is in error.

Mr. T. M. Watt.—We do not undertake to return MS. not used.

Dr. Clement Dukes.—The paper is marked for insertion.

Mr. Lawrence Hamilton.—The man is not worth notice.

One Who Has Tried.—The question has lately been fully discussed in THE LANCET.

"PARISH DOCTORS."

To the Editor of THE LANCET.

SIR,—I can thoroughly endorse the remarks made by the correspondent of the *Echo* as stated in THE LANCET of Oct. 8th. I have a parochial district of nine parishes, which requires two horses to work it, and I supply my own medicines. Many of the patients reside four and five miles from my house, and the district, taken endways, is at least ten miles, so that I have on many occasions travelled, and may be at any time called upon to travel, twenty miles to see two or three paupers. In this district there are eight rectors, whose united incomes amount to at least £6000 a year. I believe it is considerably more, but I know I am within the mark in estimating it at £6000. The population of each village varies from about 200 to 700. I receive the munificent sum of £73 10s.! I do not grudge my clerical neighbours their comfortable places, but I would ask, are their duties more onerous, more valuable, or more responsible than ours? I see them on all sides taking lengthened and frequent holidays, leaving anybody, or more frequently nobody, to take care of their flocks, save for Sunday duty, when perhaps some friend or neighbour volunteers the Sabbath sermon; whilst I never leave home. I cannot cram seven days' work into one, like my worthy friend at the rectory, and I cannot afford a locum tenens, but must jog on with my neck in the collar, like the old horse in the mill—with this exception, that my equine fellow-worker has his Sunday free from toil.

Our pay is, of course, totally inadequate for services rendered, and it is high time that something should be done to improve the position of the hard-worked and miserably underpaid parish doctor. The remedy is in our own hands, and the only reason these flagrant wrongs remain unredressed is want of union amongst ourselves. We do not sufficiently pull together. There is no other profession, business, or trade that would go on working at the starvation price paid for the Poor-law medical service. But if I resigned my appointment the first advertisement in the medical or local papers would probably bring twenty candidates for the vacancy; and until this state of things, fatal to the best interests of the profession, can be altered we can only remain where we are. The Local Government Board know this, and they snap their fingers in our faces. I have only to look round my own neighbourhood to prove the truth of this statement. A short time since a district adjoining my own was resigned in consequence of insufficient pay. The usual course was then adopted—an advertisement appeared, and at the next meeting of the guardians, to my astonishment, this valuable appointment was sought and obtained by a son of one of the surgeons to a provincial hospital, in good practice, and in partnership with his father. Again, in a neighbouring village a practitioner of over forty years' standing vaccinates gratuitously in one of the parishes for which I am public vaccinator, and attends club patients five miles from his residence for two shillings a year. I do not know whether the suggestion is a good one, or practicable, but it has often occurred to me that if the name of any man accepting a Poor-law appointment from which another has retired could be expunged from the Register we should be moving one step in the right direction. At any rate, whatever the remedy is it must be of some stringent nature, as it is very evident from the cases I have quoted, and numberless others which might be brought to bear upon the subject, that there are, unfortunately for the profession, men always to be found who are ready to work at any price or no price. To refuse the service of the Local Government Board is undoubtedly sound advice, and, in my opinion, exactly what the Poor-law medical officers throughout England would do if they could feel sure their places would not be taken by other men. But where is the gain to the profession or ourselves if we send in our resignations one month and the vacant appointments are filled up the next? I trust this subject will not be allowed to drop.

I remain, Sir, yours faithfully,

Oct. 11th, 1881. A PARISH DOCTOR.

THE BALLYMENA COTTAGE HOSPITAL.

THE *Ballymena Observer* has a pertinent letter on the rules and prospects of this cottage hospital, signed "An Ulster M.P." The writer thinks the whole project of the hospital is too small; that the site is ill-chosen; that it is a great error to go out of the town to Belfast for consultants and medical officers; and that the area of benefit is too limited. It seems most reasonable that a town like Ballymena should be allowed to officer its cottage hospital. We heartily commend the letter in question to the favourable consideration of the promoters of the hospital.

Dr. Jn. Calissink (Goerbersdorf).—We did not regard the notice as exactly suitable for our columns.

Wm. Marsh, L.D.S., and *Charles R. Suffield* will see on reference to an annotation in the present issue that we were under a wrong impression as to the nature of the question.

Mr. Archd. Johnston.—The practice appears to be a very common one.

Mr. John Nicholls.—The question is rather ambiguous. Will our correspondent put it more clearly?

MEDICAL PRACTICE IN TASMANIA.

To the Editor of THE LANCET.

SIR,—I should be much obliged to any of your subscribers or readers for information as to the chance of success in private practice in Tasmania.

I am, Sir, yours obediently,

Oct. 17th, 1881. N. S.

A HINT IN WHOOPING-COUGH.

To the Editor of THE LANCET.

SIR,—The effect of inhaling the vapours from gasworks in this distressing complaint is well known. My family being attacked with whooping-cough, I resolved, as I could not take them to the gasworks, to bring the gasworks to them. I accordingly, by means of my Lister's spray apparatus, submitted them all to the vapour of benzole night and morning, and with the most gratifying results. It certainly checked the spasm, and relieved the "whoop."—I am, Sir, yours obediently,

Oct. 19th, 1881. F.R.C.S.

Dr. Bertrand.—A great deal of information on the subject is given in a Report on Opium just issued by the Imperial Maritime Customs Department, 8, Storey's-gate, London, S.W.

Mr. W. A. Cox-Hippisley, M.B.—The case is usual. The law requires that a district medical officer shall reside within his district, unless under very special circumstances.

Querens had better consult a surgeon. We do not prescribe.

"HAMMOND'S WIRE SPLINT."

To the Editor of THE LANCET.

SIR,—I feel called upon again to trespass on your valuable space, and to show that although Mr. Lyons, in his letter of the 5th inst., would *prima facie* appear to have improved on my method of using the thin wire, in reality he has only gone back to what I did at first—viz., using a long piece of thin wire, and winding it in and out several teeth. But I soon quite gave up this long wire, as I found it to be very bad, for many reasons. Had I thought it possible that there could be two opinions on the subject, I would have given my reasons in my first letter. However, they are these:—

1st. I found that drawing a long wire between the teeth—and indeed sometimes through the gums, owing to the swollen state of the mouth often seen in these cases—was exceedingly painful to the patient, who generally became restless.

2nd. The passing of a long wire frequently cut and sawed the gums, &c., and caused much bleeding, which of course greatly increased the difficulties of the operation, especially when the teeth were crowded.

3rd. If the long wire got cut, worn, or rusted through, as it sometimes did after a few weeks' wear, the whole side became loose and useless.

4th. Owing to the attachment of teeth by gomphosis to their sockets, each tooth has the habit of turning and moving itself away from any undue pressure brought to bear on any one particular part or side of it; and from this cause the splint, although very firm and tight when first put on, became (after a few days, or even hours) more or less loosened. This is also sometimes the case with the short ligatures, but each one can then be twisted tighter if necessary, independently of the others.

Lastly. As it is very unusual to find all the teeth in a mouth sound, a tender one, when made to bear the same strain as a sound tooth (which cannot be avoided when a continuous wire is used), has often set up an alveolar abscess, and obliged me to undo the whole length of wire.

For these (I think full and sufficient) reasons I adopted a short wire of about three inches in length, and passed it round each tooth in the particular manner described by me, and quoted in Mr. Bryant's "Surgery."

I will only add that, with my experience of some 250 cases or more, during the war and since (and I have set all kinds of fractures in the upper as well as in the lower jaws with my splint), I consider the separate ligatures to be absolutely necessary for the best results to be obtained with it.

Thanking you for calling attention to the error in the illustration in the first instance, I remain, Sir, yours truly,

London, W., Oct. 17th, 1881. GURNELL HAMMOND.

SPONGE PRESSURE AS A SURGICAL DRESSING.

To the Editor of THE LANCET.

SIR,—In the *British Medical Journal* for 1878, p. 449, there is a paper by Mr. Furneaux Jordan on the use of sponge as a surgical dressing. I was not aware that Mr. Jordan was adopting this method of dressing until I received a letter from him two days ago. It was a pleasure to me to-day to read the paper referred to, bearing out as it does the highly favourable opinion I have formed of the capabilities of sponge over a very extensive field of practice, and evincing also a thorough appreciation of the principles of its application in many cases. I would only remark that the aim I had in view in the lecture published in your columns last week was to show that to obtain primary union of recent wounds we must prevent all inflammatory discharge whatever (a point which Mr. Jordan does not appear to recognise), and that sponge appeared to me the best dressing for that purpose. Other methods may hereafter be found better.

I regret that I was not earlier aware of Mr. Jordan's paper, and beg to draw your readers' attention to it, as well as to papers in the *Medical Times and Gazette* for 1857 and 1858.—I am, Sir, yours, &c.,

Manchester, Oct. 19th, 1881. JAS. HARDIE.

Surgeon.—We regret we cannot assist our correspondent.

J. B.—Marshall's Atlas of Physiology.

Quæsitor shall receive a private note.

Beta.—Office of the Crown Agents for the Colonies, Downing-street.

THE PORTABILITY OF DRUGS IN FIELD SERVICE.

To the Editor of THE LANCET.

SIR,—Our attention has just been directed to a letter in your issue of the 1st inst. by Surgeon-Major Evatt on the above. Now, this subject has received our careful attention for many years, and more than twenty years ago we practically demonstrated the fact that quinine and some other light and bulky drugs might be considerably compressed with advantage.

Since that period we have produced cubes and tablets of medicines which really were doses of compounds too large for the pilular form, or incapable of solution in water—such as, for instance, aromatic and opium confection, quinine, ipecacuanha, &c. More recently, however, in connexion with our series of gelatine products, we think we have more completely met the want expressed by Surgeon-Major Evatt, as we have lamels of Dover's powder, opium, calomel, tartar emetic, &c., in large or small doses. During the last year or two we have sent a great many of these lamellar medicines to all parts of the world, and have received most favourable reports upon their preservation and usefulness.

We cannot but think, therefore, that this adaptation of medicine must ultimately have a more extended use both with armies on the march or in the field, as well as with travellers generally.

We may perhaps be permitted a word of criticism upon another question raised by Surgeon-Major Evatt in his interesting letter. He says, "we want, above all things, to reduce compounding in the field." So far he is undoubtedly right, but he goes on to say in the next paragraph that as water and rum are always with an army, rum can be used for making tinctures in the field provided the dry ingredients are forthcoming. To this more serious form of compounding we must dissent. If the mere compounding is objectionable, we fear that a careful and complete extraction of drugs that would in any sense be worthy the name of a tincture would rarely, if ever, occur. Tinctures are not made by merely shaking the drugs and spirit together and decanting the liquid; and we expect, when such things as percolators or exhausters are to hand in the camp, much of the valuable constituents of such drugs as bark, opium, ipecacuanha, or catechu, would be thrown away.

We are, Sir, your most obedient servants,

Oct. 18th, 1881. SAVORY & MOORE.

Doubt.—The questions put by our correspondent are purely legal. The letting of the house to a rival practitioner seems unfriendly to the verge of injustice, but he must be guided solely by his legal adviser in taking any steps of redress or protest.

Mr. E. O. Clark.—It is very questionable.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Professor Humphry, Cambridge; Dr. James Adams, Ashburton; Mr. G. King, London; Mr. T. Laffan, Cashel; Mr. John White, London; Mr. F. C. Clayton, Birmingham; Dr. Stephen Mackenzie, London; Mr. Scott, London; Mr. Comfield, London; Dr. Porter Smith, Shepton Mallet; Mr. Cox-Hippisley, Leicester; Mr. T. M. Watt, Hovingham; Dr. Sizer, Brooklyn; Mr. J. R. White, Brentwood; Mr. C. de Figueiredo, Manchester; Mr. Gordon Holmes, London; Mr. Hammond, London; Mr. Marsh, Colchester; Dr. Crocker, London; Mr. Ingpen, London; Dr. W. H. White, Carshalton; Dr. Gillespie, London; Mr. Postgate, Cambridge; Mr. Higgens, London; Mr. Wilson, Jarrow-on-Tyne; Mr. F. Spence, Manchester; Mr. Gerrard, London; Mr. Fernandes; Dr. Rosser, Croydon; Dr. Oughton, London; Dr. Armstrong, Newcastle-on-Tyne; Dr. Bertrand, London; Dr. Mulvany, Portsmouth; Mr. H. Davy, Penzance; Dr. Rennie, Aldershot; Mr. Macnamara, London; Dr. Charteris, Glasgow; Mr. Sampson Gamgee, Birmingham; Mr. T. Holmes, London; Mr. Clark, Moreton-in-Marsh; Mr. John Hopkins, London; Mr. C. R. Suffield, Birmingham; Mr. Orchard, Kingussie; Surgeon Kavanagh, Delhi; Dr. Sheen, Cardiff; Mr. Gabb, Frampton; Dr. Caton, Liverpool; Professor Lister, London; Messrs. Savory and Moore, London; Mr. Baray, Cork; Professor Paget, Cambridge; Messrs. Blackie and Son, London; Mr. Blackett, London; Mr. Ikin, London; Dr. Parsons, Dover; Mr. Lawson Tait, Birmingham; Dr. Spooner, Blandford; Mr. Reade, London; Mr. James Hardie, Manchester; Mr. Salmond, London; Mr. Codlin, Ancaster; Mr. Baker, Brighton; Messrs. Stratton, Newport; Messrs. Bleak and Leach; Dr. Sugden, Dundee; Mr. Reid; Mr. Bell, Rochester; Dr. Neale, London; Mr. Pike, Southampton; Messrs. Berdoe and Co., London; Mr. Davey, Holloway; Dr. Wallace, Greenock; South Devon; F.R.C.S., Rotherham; Medicus, Saxmundham; X. Y. Z., Leamington; Quæsitor; Alethentikos; Vigilans; Quærens; Facomnia; Beta; N. S.; Nemo; Doubt; Libertas; Umbra; A late Asylum Assistant; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Bryan, London; Messrs. Crossley and Johnson, Salford; Mr. Davies, Bath; Mr. Woodman, Bridgwater; Mr. Pierce, Liverpool; Mr. M'Caully; Mr. Ecnau, Market Bosworth; Mr. Nesbitt, Castle Donnington; Messrs. Butterfield and Son, Northampton; Mr. Crookshank, London; Mrs. Bond, Tamworth; Mr. Scattergood, Leeds; Dr. Needham, Gloucester; Mr. Willoughby, Daventry; Mr. Robinson, Walsall; Mr. Smith, Sheffield; Messrs. Oliver and Boyd, Edinburgh; Messrs. Johnson and Co., Southport; Mr. Boodle, Rochdale; Mr. Eschwege, London; Mr. Davis, Detroit; Mr. Holland, Dublin; Mr. Drews, Kimberley; Mr. Oldham, Liverpool; Mr. Hewitt, Llanelly; Mr. Greenway, Southport; Mr. D'Orsey; Medicus, Kettering; W. T. W.; T. E., Gloucester; M.B., Edinburgh; Chirurgus; Medicus, Winforton; W., Brecon; Medusa; M.R.C.S., St. Ives; Resident, Bath; O. P. Q.; Medicus, Brighton; P. H., Tuam; Camb., Barnes; W. S. L.; A. B., London; Superintendent, Glasgow Infirmary; Catholic; Astra; C. B., London; X. Y., Birmingham; J. D. Long Eaton; G. E., London; Surgeon, Horncastle; C. W., Walthamstow; Medicus, Reigate; M.R.C.P.E., London; F.R.C.S., Edinburgh; &c., &c.

The Scotsman, Church Standard, Bath Herald, La Independencia Medica, Revista Frenopatica Barcelonesa, Lincolnshire Chronicle, Newcastle Daily Chronicle, Birkenhead News, &c., have been received.

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Agent for the Advertising Department in France—J. ASTIER, 57, Rue Caumartin, Paris.